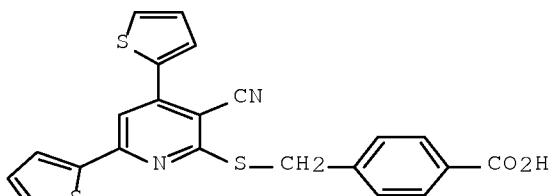
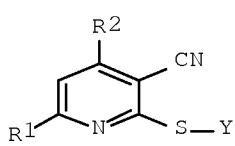


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YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:y

L1 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2004:633527 HCAPLUS Full-text  
DOCUMENT NUMBER: 141:174078  
TITLE: Preparation of thienylpyridinecarbonitriles as bacterial enoyl-ACP reductase (FabI) inhibitors.  
INVENTOR(S): Moir, Donald T.; Xiang, Yibin; Arvanites, Anthony C.; Ali, Syed Masarrat; Geng, Bolin; Ashwell, Mark A.; Orgueira, Hernan Antonio  
PATENT ASSIGNEE(S): Genome Therapeutics Corporation, USA; Arqule  
SOURCE: PCT Int. Appl., 54 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004064837	A1	20040805	WO 2004-US1327	20040116
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ				
US 20070027190	A1	20070201	US 2006-542351	20060807 <--
PRIORITY APPLN. INFO.:			US 2003-441411P	P 20030117
			WO 2004-US1327	W 20040116
OTHER SOURCE(S): MARPAT 141:174078				
ED Entered STN: 06 Aug 2004				
GI				



I

II

AB Title compds. I [R1, R2 = (un)substituted monocyclic aryl, heteroaryl; Y = X1-X2; X1 = bond, (un)substituted alkylene; X2 = aryl, heteroaryl, cycloaliph.,

etc.] and their pharmaceutically acceptable salts were prepared. For example, condensation-annulation of 1,3-di-2-thienyl-2-propen-1-one and 2-cyanoethanethioamide, followed by 4-(bromomethyl)benzoic acid S-alkylation of the resulting thioxopyridinecarbonitrile (no data provided), afforded claimed thiénylpyridinecarbonitrile II. In methicillin-resistant *Staphylococcus aureus* minimal inhibitory concentration (MIC) assays, 14-examples of compds. I exhibited MIC values ranging from 0.75->64 µg/mL, e.g., the MIC value of thiénylpyridinecarbonitrile II was 4 µg/mL. Compds. I are claimed useful for the. Of note, compds. I are proposed to inhibit bacterial enoyl-ACP reductase (FabI), a NADH-dependent enoyl [acyl carrier protein] reductase enzyme in the fatty acid biosynthesis pathway.

IC ICM A61K031-44  
 ICS C07D213-84; A61P031-04  
 CC 27-16 (Heterocyclic Compounds (One Hetero Atom))  
 Section cross-reference(s): 1  
 ST thiénylpyridinecarbonitrile prepn antibacterial agent fabI inhibition;  
 NADH dependent enoyl acyl carrier protein reductase  
 thiénylpyridinecarbonitrile prepn; methicillin resistant *staphylococcus aureus* thiénylpyridinecarbonitrile prepn antibacterial agent  
 IT Dysentery  
     (bacillary, infection, treatment of; preparation of thiénylpyridinecarbonitriles as bacterial enoyl-ACP reductase (FabI) inhibitors.)  
 IT Infection  
     (bacterial; preparation of thiénylpyridinecarbonitriles as bacterial enoyl-ACP reductase (FabI) inhibitors.)  
 IT Fatty acids, biological studies  
     RL: BSU (Biological study, unclassified); BIOL (Biological study)  
     (biosynthesis; preparation of thiénylpyridinecarbonitriles as bacterial enoyl-ACP reductase (FabI) inhibitors.)  
 IT *Acinetobacter baumannii*  
*Bacillus anthracis*  
*Citrobacter*  
*Enterobacter*  
*Enterococcus faecalis*  
*Enterococcus faecium*  
*Escherichia coli*  
*Francisella tularensis*  
*Haemophilus influenzae*  
*Klebsiella*  
*Listeria monocytogenes*  
*Moraxella catarrhalis*  
*Mycobacterium tuberculosis*  
*Neisseria meningitidis*  
*Proteus mirabilis*  
*Proteus vulgaris*  
*Pseudomonas aeruginosa*  
*Salmonella*  
*Serratia*  
*Staphylococcus aureus*  
*Staphylococcus epidermidis*  
*Stenotrophomonas maltophilia*  
     (infection, treatment of; preparation of thiénylpyridinecarbonitriles as bacterial enoyl-ACP reductase (FabI) inhibitors.)  
 IT Antibacterial agents  
     Human  
         (preparation of thiénylpyridinecarbonitriles as bacterial enoyl-ACP reductase (FabI) inhibitors.)  
 IT 37251-08-4D, Enoyl-acyl carrier protein reductase, fabI protein  
     RL: BSU (Biological study, unclassified); BIOL (Biological study)

(preparation of thienylpyridinecarbonitriles as bacterial enoyl-ACP reductase (FabI) inhibitors.)  
IT 296797-06-3P 296798-15-7P 300844-13-7P 300844-14-8P 328282-01-5P  
340808-61-9P 354545-70-3P 354555-67-2P 445266-27-3P 445383-75-5P  
496018-68-9P 733052-04-5P 733052-05-6P 733052-06-7P 733052-07-8P  
733052-08-9P 733052-09-0P  
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation of thienylpyridinecarbonitriles as bacterial enoyl-ACP reductase (FabI) inhibitors.)  
IT 2309-48-0 6232-88-8 7357-70-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation of thienylpyridinecarbonitriles as bacterial enoyl-ACP reductase (FabI) inhibitors.)  
IT 243987-05-5P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation of thienylpyridinecarbonitriles as bacterial enoyl-ACP reductase (FabI) inhibitors.)  
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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=> d iall code 12 1-2  
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L2 ANSWER 1 OF 2 WPIX COPYRIGHT 2008 THOMSON REUTERS on STN  
ACCESSION NUMBER: 2008-E22122 [29] WPIX  
DOC. NO. NON-CPI: N2008-330338 [29]  
TITLE: Starter box for a remote-control toy car has two carriages supported on track assemblies mounted on two pivoting racks with top pivot axles, columns, links having pivot holes, and bottom shanks firmly fastened to top axle holes of two bases  
DERWENT CLASS: Q51; W04  
INVENTOR: LU K  
PATENT ASSIGNEE: (LUKK-I) LU K  
COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND DATE	WEEK	LA	PG	MAIN IPC
US 20080078348	A1 20080403 (200829)*	EN	20	[5]	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 20080078348	A1	US 2006-542351	20061002

PRIORITY APPLN. INFO: US 2006-542351 20061002

## INT. PATENT CLASSIF.:

IPC ORIGINAL: F02N0017-00 [I,A]; F02N0017-00 [I,C]  
 USCLASS NCLM: 123/179.100

## BASIC ABSTRACT:

US 20080078348 A1 UPAB: 20080504

NOVELTY - Two pivoting master racks (1,1A) have top pivot axles, columns, links (14) with pivot holes and mouthpieces, and bottom shanks. Two bases (2) have top axle holes. Racks and bases are firmly secured together. Two lock screws (15) and two pairs of track assemblies are mounted on the racks. Two carriages are supported on track assemblies. Each carriage has a longitudinal bottom plate and a transverse top plate having two transverse sliding slots aligned in a line. Four retainers (45) are coupled to the top plates and movable along the sliding slots for securing a remote-control toy car.

USE - A starter box for a remote-control toy car.

ADVANTAGE - The box facilitates set-up and is easy to carry. It can be detached and flattened to reduce the size for carrying. The detachable starter box allows adjustment in height, length, and width to secure any of a variety of remote-control toy cars firmly in position for starting.

DESCRIPTION OF DRAWINGS - The drawing shows an elevation view of a starter box.

Master racks (1,1A)

Bases (2)

Links (14)

Lock screws (15)

Retainers (45)

MANUAL CODE: EPI: W04-X03E1C; W04-X03E8

AN 2008-E22122 [29] WPIX

DC Q51; W04

IPCI F02N0017-00 [I,A]; F02N0017-00 [I,C]

NCL NCLM 123/179.100

MC EPI: W04-X03E1C; W04-X03E8

L2 ANSWER 2 OF 2	WPIX COPYRIGHT 2008	THOMSON REUTERS on STN
ACCESSION NUMBER:	2004-580648 [56]	WPIX
DOC. NO. CPI:	C2004-211643 [56]	
TITLE:	Use of thiol pyridine derivatives and pyridothonione derivatives for the treatment of bacterial infections	
DERWENT CLASS:	B03	
INVENTOR:	ALI S M; ARVANITES A C; ASHWELL M A; GENG B; MOIR D T; ORGUEIRA H A; XIANG Y; KAPLAN A P	
PATENT ASSIGNEE:	(ARQU-N) ARQUELE; (GENO-N) GENOME THERAPEUTICS CORP; (ALIS-I) ALI S M; (ARVA-I) ARVANITES A C; (ASHW-I) ASHWELL M A; (GENG-I) GENG B; (KAPL-I) KAPLAN A P; (MOIR-I) MOIR D T; (ORGU-I) ORGUEIRA H A; (XIAN-I) XIANG Y	
COUNTRY COUNT:	106	

## PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
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WO 2004064837	A1	20040805	(200456)*	EN	54[2]	
US 20070027190	A1	20070201	(200712)	EN		

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
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WO 2004064837	A1	WO 2004-US1327	20040116

US 20070027190 A1 Provisional	US 2003-441411P 20030117
US 20070027190 A1	WO 2004-US1327 20040116
US 20070027190 A1	<u>US 2006-542351 20060807</u>

PRIORITY APPLN. INFO: US 2003-441411P 20030117  
US 2006-542351 20060807

## INT. PATENT CLASSIF.:

IPC ORIGINAL: A61K0031-4412 [I,A]; A61K0031-4412 [I,C]; A61K0031-4427 [I,C]; A61K0031-4436 [I,A]; A61K0031-4439 [I,A]

IPC RECLASSIF.: A61K0031-44 [I,A]; A61K0031-44 [I,C]; A61P0031-00 [I,C];  
A61P0031-04 [I,A]; C07D0213-00 [I,C]; C07D0213-85 [I,A];  
C07D0405-00 [I,C]; C07D0405-04 [I,A]; C07D0409-00 [I,C];  
C07D0409-04 [I,A]; C07D0409-14 [I,A]

ECLA: A61K0031-44; C07D0213-85; C07D0405-04+307B+213;  
C07D0409-04+333B+213; C07D0409-14+333B+333B+213

USCLASS NCLM: 514/341.000

NCLS: 514/342.000; 514/344.000

## BASIC ABSTRACT:

WO 2004064837 A1 UPAB: 20050531

NOVELTY - Treatment of bacterial infection comprises administration of pyridothione derivatives (A) and/or thiol pyridine derivatives (B).

DETAILED DESCRIPTION - Treatment of bacterial infection comprises administration of pyridothione derivatives of formula (A) and/or thiol pyridine derivatives of formula (B) and their salts. In formula A:

R1, R2 = monocyclic aryl or heteroaryl groups, both optionally substituted by triazole, tetrazole or one or more acyclic substituents; and  
R3 = H or optionally substituted 1-8C aliphatic, 3-8C cycloaliphatic or (hetero) aryl group.

In formula B:

R1, R2 = monocyclic (hetero) aryl group, optionally substituted by triazole, tetrazole or one or more acyclic substituents;

X1 = 1-3C alkylene chain (optionally substituted by 1-4C alkyl, triazole, tetrazole or an acidic group); either

X2 = (hetero) aryl or 3-8C cycloaliphatic ring (optionally substituted by triazole, tetrazole or acyclic substituents); or

X2 = triazole, tetrazole, an acidic group, -(CO)NRaRb, (CNH)NRaRb or (CS)NRaRb; either

Ra, Rb = H or optionally substituted (hetero)aryl, 3-8C cycloaliphatic or 1-4C alkyl; or

NRaRb = optionally substituted non-aromatic heterocyclic group.

ACTIVITY - Antibacterial.

MECHANISM OF ACTION - FabI inhibitor. (A) and (B) were assessed for fabI inhibiting activity in *Staphylococcus aureus*. The median inhibitory concentration of 4-(3-cyano-4,6-di-thiophen-2-yl-pyridin-2-ylsulfanyl)methylbenzoic acid was 3 microM.

USE - (A) and (B) are useful for the treatment of infections caused by bacteria expressing a fabI protein; the bacterial infection is caused by *Acinetobacter baumanii*, *Bacillus anthracis*, *Citrobacter* sp., *Escherichia coli*, *Enterobacter* sp., *Enterococcus faecalis*, *Enterococcus faecium*, *Francisella tularensis*, *Haemophilus influenzae*, *Klebsiella* sp., *Listeria monocytogenes*, *Moraxella catarrhalis*, *Mycobacterium tuberculosis*, *Neisseria meningitidis*, *Proteus mirabilis*, *Proteus vulgaris*, *Pseudomonas aeruginosa*, *Salmonella* sp., *Serratia* sp., *Shigella* sp., *Stenotrophomonas maltophilia*, *Staphylococcus aureus* or *Staphylococcus epidermidis* (claimed). MANUAL CODE: CPI: B07-A01; B07-B01; B07-D04C; B14-A01A; B14-A01B;

B14-A01B1; B14-A01B4

AN 2004-580648 [56] WPIX

DC B03

IPCI A61K0031-4412 [I,A]; A61K0031-4412 [I,C]; A61K0031-4427 [I,C];  
A61K0031-4436 [I,A]; A61K0031-4439 [I,A]

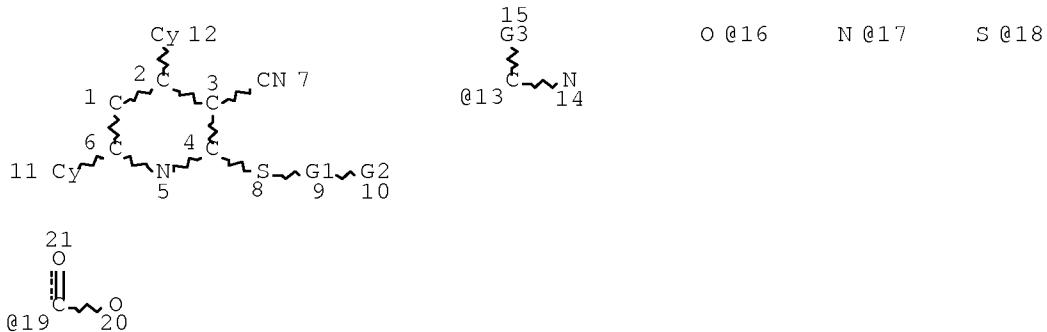
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 NCL NCLM 514/341.000  
 NCLS 514/342.000; 514/344.000  
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STEREO ATTRIBUTES: NONE

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SEARCH TIME: 00.00.04

6844 ANSWERS

=> d que nos 140  
L1 1 SEA FILE=HCAPLUS ABB=ON PLU=ON US2006-542351/APPS  
L3 TRANSFER PLU=ON L1 1- RN : 22 TERMS  
L4 22 SEA FILE=REGISTRY ABB=ON PLU=ON L3  
L12 STR  
L14 6844 SEA FILE=REGISTRY SSS FUL L12  
L15 17 SEA FILE=REGISTRY ABB=ON PLU=ON L4 AND L14  
L17 QUE ABB=ON PLU=ON MOIR, D?/AU  
L18 QUE ABB=ON PLU=ON XIANG, Y?/AU  
L19 QUE ABB=ON PLU=ON ARVANITES, A?/AU  
L20 QUE ABB=ON PLU=ON ARVANITES, T?/AU  
L21 QUE ABB=ON PLU=ON ALI, S?/AU  
L22 QUE ABB=ON PLU=ON GENG, B?/AU  
L23 QUE ABB=ON PLU=ON ASHWELL, M?/AU  
L24 QUE ABB=ON PLU=ON ORGUEIRA, H?/AU  
L25 QUE ABB=ON PLU=ON KAPLAN, A?/AU

10/542,351

L26           QUE ABB=ON PLU=ON (OSCIENT OR ARQULE) /CS, SO, PA  
L27           QUE ABB=ON PLU=ON AY<2004 OR PY<2004 OR PRY<2004 OR MY  
L28           <2004 OR REVIEW/DT  
L29           QUE ABB=ON PLU=ON INFECTION+PFT, OLD, NEW, NT/CT(L) BACTER  
              ?  
L29           QUE ABB=ON PLU=ON "ANTIBACTERIAL AGENTS"+PFT, OLD, NEW/C  
              T  
L30           QUE ABB=ON PLU=ON ANTIINFECT? OR (ANTI(1W) INFECT?)  
L31           QUE ABB=ON PLU=ON ANTIBACTER? OR ANTIBIOT? OR ANTIMICR  
              OB? OR (ANTI(1W) (BACTER? OR BIOT? OR MICROB?))  
L32           QUE ABB=ON PLU=ON (A61P0031-04 OR A61P0031-06 OR A61P0  
              031-08)/IPC  
L33           67 SEA FILE=HCAPLUS ABB=ON PLU=ON L14  
L34           5 SEA FILE=HCAPLUS ABB=ON PLU=ON L15  
L35           67 SEA FILE=HCAPLUS ABB=ON PLU=ON (L33 OR L34)  
L36           8 SEA FILE=HCAPLUS ABB=ON PLU=ON L35 AND (L28 OR L29 OR L30 OR  
              L31 OR L32)  
L37           67 SEA FILE=HCAPLUS ABB=ON PLU=ON (L33 OR L34 OR L35 OR L36)  
L38           2 SEA FILE=HCAPLUS ABB=ON PLU=ON L37 AND (L17 OR L18 OR L19 OR  
              L20 OR L21 OR L22 OR L23 OR L24 OR L25 OR L26)  
L39           65 SEA FILE=HCAPLUS ABB=ON PLU=ON L37 NOT L38  
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=> d his 146

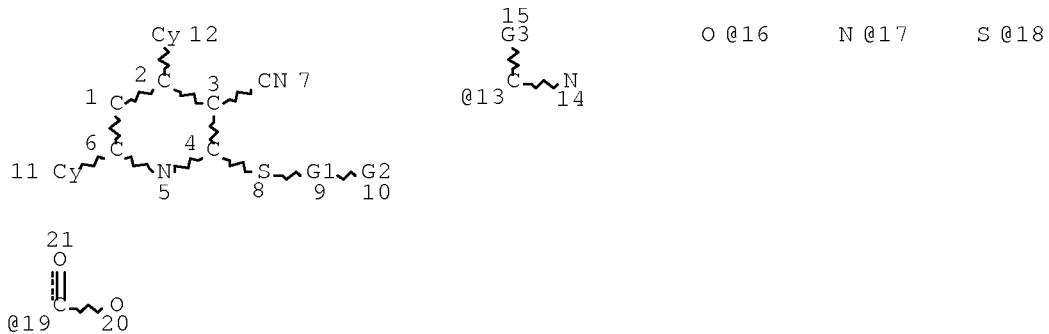
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L46           3 S L45 AND L27

=> d que nos 146

L12           STR  
L14           6844 SEA FILE=REGISTRY SSS FUL L12  
L17           QUE ABB=ON PLU=ON MOIR, D?/AU  
L18           QUE ABB=ON PLU=ON XIANG, Y?/AU  
L19           QUE ABB=ON PLU=ON ARVANITES, A?/AU  
L20           QUE ABB=ON PLU=ON ARVANITES, T?/AU  
L21           QUE ABB=ON PLU=ON ALI, S?/AU  
L22           QUE ABB=ON PLU=ON GENG, B?/AU  
L23           QUE ABB=ON PLU=ON ASHWELL, M?/AU  
L24           QUE ABB=ON PLU=ON ORGUEIRA, H?/AU  
L25           QUE ABB=ON PLU=ON KAPLAN, A?/AU  
L26           QUE ABB=ON PLU=ON (OSCIENT OR ARQULE) /CS, SO, PA  
L27           QUE ABB=ON PLU=ON AY<2004 OR PY<2004 OR PRY<2004 OR MY  
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L42           27 SEA FILE=REGISTRY ABB=ON PLU=ON L14 AND (USPATFULL OR USPAT2  
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L43           6 SEA L42  
L44           1 SEA L43 AND (L17 OR L18 OR L19 OR L20 OR L21 OR L22 OR L23 OR  
              L24 OR L25 OR L26)  
L45           5 SEA L43 NOT L44  
L46           3 SEA L45 AND L27

=> d que 147

L12           STR



REP G1=(0-4) C

VAR G2=CY/19/13

VAR G3=16/17/18

NODE ATTRIBUTES:

NSPEC IS RC AT 14

CONNECT IS E1 RC AT 16

CONNECT IS E1 RC AT 17

CONNECT IS E1 RC AT 18

DEFAULT MLEVEL IS ATOM

GGCAT IS MCY UNS AT 11

GGCAT IS MCY UNS AT 12

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 21

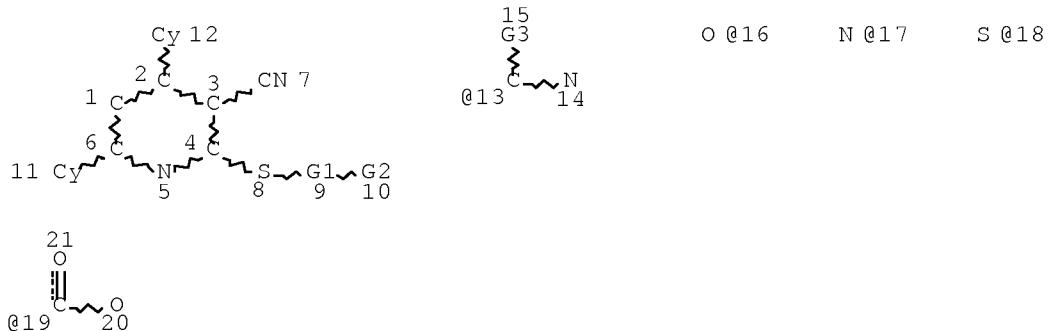
STEREO ATTRIBUTES: NONE

L14 6844 SEA FILE=REGISTRY SSS FUL L12

L47 0 SEA FILE=REGISTRY ABB=ON PLU=ON L14 AND (MEDLINE OR BIOSIS  
OR EMBASE OR CABAB OR BIOTECHNO OR DRUGU OR VETU)/LC

=> d que stat 150

L12 STR



REP G1=(0-4) C

VAR G2=CY/19/13

VAR G3=16/17/18

## NODE ATTRIBUTES:

NSPEC IS RC AT 14  
 CONNECT IS E1 RC AT 16  
 CONNECT IS E1 RC AT 17  
 CONNECT IS E1 RC AT 18  
 DEFAULT MLEVEL IS ATOM  
 GGCAT IS MCY UNS AT 11  
 GGCAT IS MCY UNS AT 12  
 DEFAULT ECLEVEL IS LIMITED

## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 21

## STEREO ATTRIBUTES: NONE

L50 26 SEA FILE=WPIX SSS FUL L12

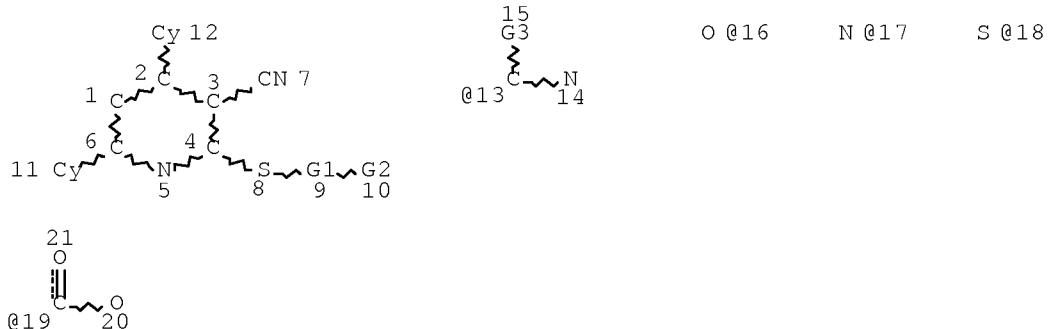
100.0% PROCESSED 277 ITERATIONS

26 ANSWERS

SEARCH TIME: 00.00.03

=> d que 156

L2 2 SEA FILE=WPIX ABB=ON PLU=ON US2006-542351/APPS  
 L12 STR



REP G1=(0-4) C

VAR G2=CY/19/13

VAR G3=16/17/18

## NODE ATTRIBUTES:

NSPEC IS RC AT 14  
 CONNECT IS E1 RC AT 16  
 CONNECT IS E1 RC AT 17  
 CONNECT IS E1 RC AT 18  
 DEFAULT MLEVEL IS ATOM  
 GGCAT IS MCY UNS AT 11  
 GGCAT IS MCY UNS AT 12  
 DEFAULT ECLEVEL IS LIMITED

## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 21

## STEREO ATTRIBUTES: NONE

L17 QUE ABB=ON PLU=ON MOIR, D?/AU

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L18      QUE ABB=ON PLU=ON XIANG, Y?/AU
L19      QUE ABB=ON PLU=ON ARVANITES, A?/AU
L20      QUE ABB=ON PLU=ON ARVANITES, T?/AU
L21      QUE ABB=ON PLU=ON ALI, S?/AU
L22      QUE ABB=ON PLU=ON GENG, B?/AU
L23      QUE ABB=ON PLU=ON ASHWELL, M?/AU
L24      QUE ABB=ON PLU=ON ORGUEIRA, H?/AU
L25      QUE ABB=ON PLU=ON KAPLAN, A?/AU
L26      QUE ABB=ON PLU=ON (OSCIENT OR ARQULE)/CS, SO, PA
L27      QUE ABB=ON PLU=ON AY<2004 OR PY<2004 OR PRY<2004 OR MY
          <2004 OR REVIEW/DT

L50      26 SEA FILE=WPIX SSS FUL L12
L51      7 SEA FILE=WPIX ABB=ON PLU=ON (RABM4F/DCN OR RAF3OD/DCN OR
          RAF3OJ/DCN OR RAF3ON/DCN OR RAF3OO/DCN OR RAF3OQ/DCN OR
          RAF3OS/DCN OR RAF3OT/DCN OR RAF3OY/DCN OR RAF3OZ/DCN OR
          RAF3PA/DCN OR RAF3PB/DCN OR RAF3P4/DCN OR RAF3P5/DCN OR
          RAF3P6/DCN OR RAF3P9/DCN OR RAI1QS/DCN OR RAOHFY/DCN OR
          RAOHFZ/DCN OR RAOHG0/DCN OR RAOHG1/DCN OR RAOHG2/DCN OR
          RAOHG3/DCN OR RAOHG4/DCN OR RAR23T/DCN OR RAVPWX/DCN) OR
          L50/DCR

L52      1 SEA FILE=WPIX ABB=ON PLU=ON L51 AND (L17 OR L18 OR L19 OR
          L20 OR L21 OR L22 OR L23 OR L24 OR L25 OR L26)
L53      1 SEA FILE=WPIX ABB=ON PLU=ON L52 AND L2
L54      1 SEA FILE=WPIX ABB=ON PLU=ON (L52 OR L53)
L55      6 SEA FILE=WPIX ABB=ON PLU=ON L51 NOT L54
L56      2 SEA FILE=WPIX ABB=ON PLU=ON L55 AND L27

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=> dup rem 140 146 156  
FILE 'HCAPLUS' ENTERED AT 17:03:28 ON 18 SEP 2008  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'USPATFULL' ENTERED AT 17:03:28 ON 18 SEP 2008  
CA INDEXING COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'WPIX' ENTERED AT 17:03:28 ON 18 SEP 2008  
COPYRIGHT (C) 2008 THOMSON REUTERS  
PROCESSING COMPLETED FOR L40  
PROCESSING COMPLETED FOR L46  
PROCESSING COMPLETED FOR L56  
L57 51 DUP REM L40 L46 L56 (3 DUPLICATES REMOVED)  
ANSWERS '1-49' FROM FILE HCAPLUS  
ANSWERS '50-51' FROM FILE USPATFULL

=> file stnguide  
FILE 'STNGUIDE' ENTERED AT 17:03:50 ON 18 SEP 2008  
USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT  
COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

FILE CONTAINS CURRENT INFORMATION.  
LAST RELOADED: Sep 12, 2008 (20080912/UP).

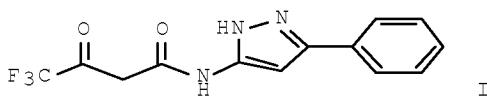
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 YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, USPATFULL' - CONTINUE? (Y)/N:y

L57 ANSWER 1 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 1  
 ACCESSION NUMBER: 2005:453800 HCAPLUS Full-text  
 DOCUMENT NUMBER: 143:7706  
 TITLE: Pyrazole and other heterocyclics preparation for  
 treating conditions associated with an Edg-4 receptor  
 INVENTOR(S): Solow-Cordero, David; Shankar, Geetha; Spencer,  
 Juliet; Gluchowski, Charles  
 PATENT ASSIGNEE(S): USA  
 SOURCE: U.S. Pat. Appl. Publ., 67 pp., Cont.-in-part of U.S.  
 Ser. No. 347,182, abandoned.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 6  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20050113283	A1	20050526	US 2003-390429	20030314 <--
PRIORITY APPLN. INFO.:			US 2002-350445P	P 20020118 <--
			US 2003-438996P	P 20030110 <--
			US 2003-440328P	P 20030116 <--
			US 2003-440329P	P 20030116 <--
			US 2003-440331P	P 20030116 <--
			US 2003-440332P	P 20030116 <--
			US 2003-440334P	P 20030116 <--
			US 2003-440335P	P 20030116 <--
			US 2003-440345P	P 20030116 <--
			US 2003-440346P	P 20030116 <--
			US 2003-440347P	P 20030116 <--
			US 2003-347182	B2 20030121 <--

OTHER SOURCE(S): CASREACT 143:7706; MARPAT 143:7706

ED Entered STN: 27 May 2005  
 GI



AB The present invention provides a method of modulating an Edg-4 receptor mediated biol. activity in a cell. A cell expressing the Edg-4 receptor is contacted with a modulator of an Edg-4 receptor sufficient to modulate the Edg-4 receptor mediated biol. activity. In another aspect, the present invention provides a method for modulating an Edg-4 receptor mediated biol. activity in a subject. E.g., I was prepared from Et 4,4,4-trifluoroacetoacetate and 5-phenyl-1H-pyrazol-3-ylamine. I and other derivs. were tested for inhibition of the Edg-4 receptor and other pharmacol. tests such as proliferation, IL-8 and VEGF assays.

IC ICM A61K031-00

INCL 514001000

CC 28-8 (Heterocyclic Compounds (More Than One Hetero Atom))

Section cross-reference(s): 1

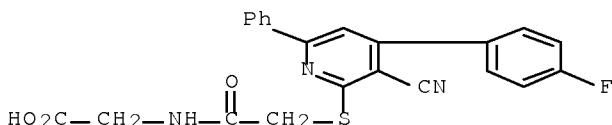
IT 49843-94-9P 90212-73-0P 93103-19-6P 136382-28-0P 292076-38-1P  
 300818-19-3P 304650-31-5P, 3-(2,6-Dichlorophenyl)-6-trifluoromethyl-[1,2,4]triazolo[4,3-a]pyridine 311799-07-2P, 3-(2-Chloro-6-fluorophenyl)-6-trifluoromethyl-[1,2,4]triazolo[4,3-a]pyridine 312519-16-7P,  
 3-(2,3-Dichlorophenyl)-6-trifluoromethyl-[1,2,4]triazolo[4,3-a]pyridine 312594-43-7P 334498-72-5P, 1-(2,6-Dichlorophenyl)-6,7-dimethoxy-1,4-dihydro-2H-isoquinolin-3-one 337349-59-4P 337469-26-8P 337498-14-3P  
 353253-35-7P 353463-50-0P 400064-03-1P 569655-94-3P  
 569655-98-7P 569656-08-2P, N-[5-(3,4-Dichlorophenyl)-1H-pyrazol-3-yl]-4,4,4-trifluoro-3-oxobutyramide 569656-10-6P 569656-11-7P  
 569656-12-8P 569656-13-9P 569656-14-0P 569656-15-1P 569656-17-3P  
 569656-18-4P 569656-19-5P 569656-20-8P 569656-21-9P 709635-53-0P  
 852310-99-7P, 4,4,4-Trifluoro-N-[5-(4-methoxyphenyl)-1H-pyrazol-3-yl]-3-oxo-butyramide 852311-00-3P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(pyrazole and other heterocyclics preparation for treating conditions associated with an Edg-4 receptor)

IT 353463-50-0P  
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (pyrazole and other heterocyclics preparation for treating conditions associated with an Edg-4 receptor)

RN 353463-50-0 HCPLUS

CN Glycine, N-[[[3-cyano-4-(4-fluorophenyl)-6-phenyl-2-pyridinyl]thio]acetyl]-  
 (9CI) (CA INDEX NAME)

L57 ANSWER 2 OF 51 HCPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 2

ACCESSION NUMBER: 2003:591307 HCPLUS Full-text

DOCUMENT NUMBER: 139:143997

TITLE: Methods using Edg receptor modulators for the treatment of Edg receptor-associated conditions

INVENTOR(S): Shankar, Geetha; Solow-Cordero, David; Spencer, Juliet V.; Gluchowski, Charles

PATENT ASSIGNEE(S): Ceretek LLC, USA

SOURCE: PCT Int. Appl., 293 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 6

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2003062392	A2	20030731	WO 2003-US1881	20030121 <--
WO 2003062392	A3	20050120		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2473740	A1	20030731	CA 2003-2473740	20030121 <--
AU 2003214873	A1	20030902	AU 2003-214873	20030121 <--
EP 1513522	A2	20050316	EP 2003-710713	20030121 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2005519915	T	20050707	JP 2003-562260	20030121 <--
US 20050261298	A1	20051124	US 2003-390428	20030314 <--
US 2002-350445P P 20020118 <-- US 2002-350446P P 20020118 <-- US 2002-350447P P 20020118 <-- US 2002-350448P P 20020118 <-- WO 2003-US1881 W 20030121 <-- US 2003-352579 B2 20030127 <--				

PRIORITY APPLN. INFO.: MARPAT 139:143997

ED Entered STN: 01 Aug 2003

AB The invention provides a method of modulating an Edg-2, Edg-3, Edg-4 or Edg7 receptor-mediated biol. activity in a cell. A cell expressing the Edg-2, Edg-3, Edg-4 or Edg 7 receptor is contacted with a modulator of the Edg-2, Edg-3, Edg-4 or Edg 7 receptor sufficient to modulate receptor mediated biol. activity. In another aspect, the present invention provides a method for modulating an Edg-2, Edg-3, Edg-4 or Edg-7 receptor mediated biol. in a subject. A therapeutically effective amount of a modulator of the Edg-2, Edg-3, Edg-4 or Edg7 receptor is administered to the subject. Preparation of compds., e.g. 4,4,4-trifluoro-3-oxo-N-(5-phenyl-2H-pyrazol-3-yl)butyramide, is described.

IC ICM C12N

CC 1-12 (Pharmacology)

Section cross-reference(s): 28

IT 49843-94-9	90212-73-0	107235-67-6	136382-28-0	171286-07-0
177360-28-0	292076-38-1	306764-68-1	309282-30-2	311773-65-6
312594-43-7	321679-76-9	322662-05-5	327167-87-3	329350-38-1
330630-42-7	331274-84-1	332161-39-4	337349-59-4	337469-26-8
337498-14-3	346699-98-7	<u>353463-50-0</u>	353793-15-4	
364051-15-0	383164-60-1	389079-78-1	400064-03-1	569655-97-6
569655-98-7	569656-22-0	569656-28-6		

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(Edg receptor modulators for treatment of Edg receptor-associated conditions)

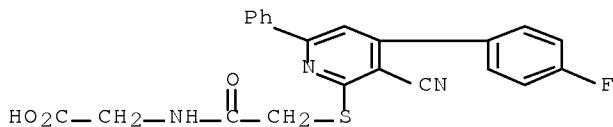
IT 353463-50-0

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(Edg receptor modulators for treatment of Edg receptor-associated conditions)

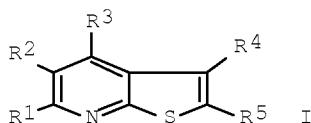
RN 353463-50-0 HCAPLUS

CN Glycine, N-[[[3-cyano-4-(4-fluorophenyl)-6-phenyl-2-pyridinyl]thio]acetyl]- (9CI) (CA INDEX NAME)



L57 ANSWER 3 OF 51 HCPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2005:632264 HCPLUS [Full-text](#)  
 DOCUMENT NUMBER: 143:146724  
 TITLE: Thienopyridine compounds as I<sub>K</sub>B kinase inhibitors  
 INVENTOR(S): Horiguchi, Yoshiaki; Matsumoto, Takahiro; Hosono, Hiroshi; Kawamoto, Tomohiro  
 PATENT ASSIGNEE(S): Takeda Chemical Industries, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 122 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005194198	A	20050721	JP 2003-435023	20031226 <--
PRIORITY APPLN. INFO.:			JP 2003-435023	20031226 <--
OTHER SOURCE(S):	MARPAT	143:146724		
ED Entered STN:	21 Jul 2005			
GI				



AB The invention provides thienopyridine compds. I (R1, R2, R3, R4 = H, substituent; R5 = substituent) or their salts or prodrugs as I<sub>K</sub>B kinase inhibitors for treatment of diabetes and related disease. For example, 3-amino-6-(4-aminopiperidin-1-yl)-4-(2-furyl)thieno[2,3-b]pyridine-2-carboxamide was prepared, and examined for its inhibitory effect on I<sub>K</sub>B kinase, TNF $\alpha$ , and NH $\kappa$ B transcription in vitro. Also, a capsule containing 3-amino-4-(3-furyl)6-piperidin-1-ylthieno[2,3-b]pyridine-2-carboxamide 30 mg/capsule was formulated.

IC ICM A61K031-4365  
 ICS A61K031-444; A61K031-4545; A61K031-4725; A61K031-496; A61K031-5377; A61K031-55; A61K031-551; A61P003-04; A61P003-10; A61P009-10; A61P011-00; A61P017-00; A61P019-02; A61P029-00; A61P031-04; A61P035-00; A61P037-02; A61P037-06; A61P037-08

CC 1-12 (Pharmacology)  
 Section cross-reference(s): 28, 63

IT 5275-12-7P 5447-87-0P 6337-70-8P 10432-44-7P 13565-44-1P

14313-09-8P 16806-88-5P 20668-00-2P 20890-12-4P 20890-14-6P  
 20890-16-8P 22966-05-8P 22966-06-9P 22966-19-4P 22966-22-9P  
 22966-24-1P 22966-25-2P 22966-26-3P 24721-24-2P 39511-11-0P  
 39511-12-1P 40524-62-7P 41162-19-0P, (2-Oxo-4-phenylbutyl)phosphonic acid dimethyl ester 53940-02-6P 53940-08-2P 53940-12-8P  
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 177947-96-5P 189442-78-2P 201991-24-4P 206989-61-9P,  
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 858644-58-3P 858644-59-4P 858644-60-7P 858644-61-8P 858644-62-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of thienopyridine compds. as IB kinase inhibitors)

IT

858644-17-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

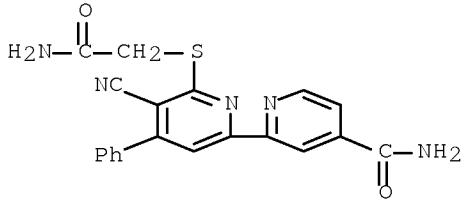
(preparation of thienopyridine compds. as IB kinase inhibitors)

RN

858644-17-4 HCPLUS

CN

[2,2'-Bipyridine]-4-carboxamide, 6' -[(2-amino-2-oxoethyl)thio]-5'-cyano-4'-phenyl- (CA INDEX NAME)



L57 ANSWER 4 OF 51 HCPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2004:1016002 HCPLUS Full-text.  
 DOCUMENT NUMBER: 142:6311  
 TITLE: A preparation of benzamide derivatives, useful as glyoxalase inhibitors  
 INVENTOR(S): Ashton, Mark; Davidson, Alan; Thomas, Russell; Whittaker, Mark  
 PATENT ASSIGNEE(S): Chroma Therapeutics Limited, UK  
 SOURCE: PCT Int. Appl., 77 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

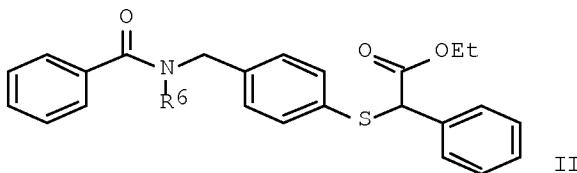
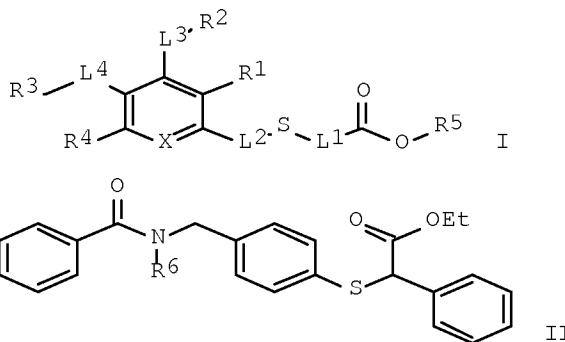
## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004101506	A1	20041125	WO 2004-GB2101	20040514 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004238625	A1	20041125	AU 2004-238625	20040514 <--
CA 2525438	A1	20041125	CA 2004-2525438	20040514 <--
EP 1622869	A1	20060208	EP 2004-733031	20040514 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
JP 2006528964	T	20061228	JP 2006-530505	20040514 <--
US 20070015799	A1	20070118	US 2005-556901	20051115 <--
PRIORITY APPLN. INFO.:			GB 2003-11195	A 20030515 <--
			WO 2004-GB2101	W 20040514

OTHER SOURCE(S): MARPAT 142:6311

ED Entered STN: 25 Nov 2004

GI



AB The invention relates to a preparation of benzamide derivs. of formula I [wherein: X is N or CH; R1 is H, CN, halogen, NH2, or S-alkyl, etc.; R2 is H, CF3, (un)substituted aryl, cycloalkyl, or heterocyclyl, etc.; R3 is the same as R2 excluding CF3; R4 is H, (un)substituted aryl or heterocyclyl; R5 is H, (un)substituted alkyl, aryl, or alkylene-aryl; L1 is (un)substituted alkylene, arylene, or alkylene-arylene, etc.; L2 is a single bond, (un)substituted alkylene, or C(O)-alkylene, etc.; L3 and L4 are independently selected from a single bond, (un)substituted alkylene, or alkylene-NHN(OH)C(O)-arylene, etc.], useful as glyoxalase inhibitors. For instance, benzamide derivative II (R6 =

OH; 80% proliferation inhibition in HL60s, IC<sub>50</sub> = 8.3 μM) was prepared via hydrolysis of N-(benzoyloxy)benzamide II [R<sub>6</sub> = OC(O)Ph] with a yield of 41%.

IC ICM C07C323-62  
ICS C07D213-70; C07D333-38; A61K031-10; A61K031-44; A61K031-4436; A61K031-381; A61P035-00

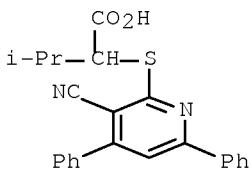
CC 25-19 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)  
Section cross-reference(s): 1, 63

IT 324774-82-5P 332040-74-1P 352544-89-9P  
354555-20-7P 354555-66-1P 354555-67-2P  
371222-06-9P 371237-12-6P 736152-30-0P 798555-86-9P  
798555-91-6P 798555-92-7P  
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation of benzamide derivs. useful as glyoxalase inhibitors)

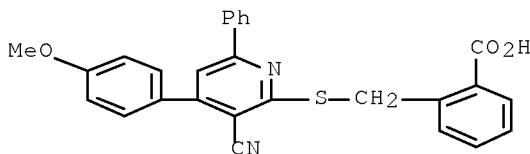
IT 332040-74-1P 352544-89-9P 354555-20-7P  
354555-66-1P 354555-67-2P 371222-06-9P  
371237-12-6P  
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation of benzamide derivs. useful as glyoxalase inhibitors)

RN 332040-74-1 HCPLUS

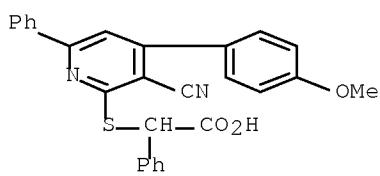
CN Butanoic acid, 2-[(3-cyano-4,6-diphenyl-2-pyridinyl)thio]-3-methyl- (CA INDEX NAME)



RN 352544-89-9 HCPLUS  
CN Benzoic acid, 2-[[3-cyano-4-(4-methoxyphenyl)-6-phenyl-2-pyridinyl]thio]methyl- (CA INDEX NAME)

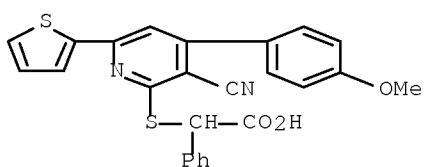


RN 354555-20-7 HCPLUS  
CN Benzeneacetic acid, α-[[3-cyano-4-(4-methoxyphenyl)-6-phenyl-2-pyridinyl]thio]- (CA INDEX NAME)



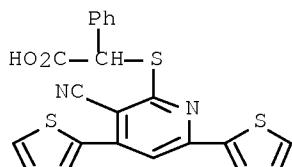
RN 354555-66-1 HCAPLUS

CN Benzeneacetic acid,  $\alpha$ -[ [3-cyano-4-(4-methoxyphenyl)-6-(2-thienyl)-2-pyridinyl]thio]- (CA INDEX NAME)



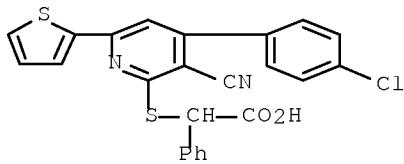
RN 354555-67-2 HCAPLUS

CN Benzeneacetic acid,  $\alpha$ -[ (3-cyano-4,6-di-2-thienyl-2-pyridinyl)thio]- (CA INDEX NAME)



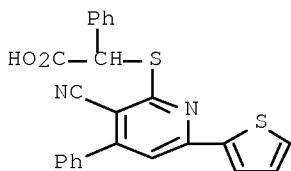
RN 371222-06-9 HCAPLUS

CN Benzeneacetic acid,  $\alpha$ -[ [4-(4-chlorophenyl)-3-cyano-6-(2-thienyl)-2-pyridinyl]thio]- (CA INDEX NAME)



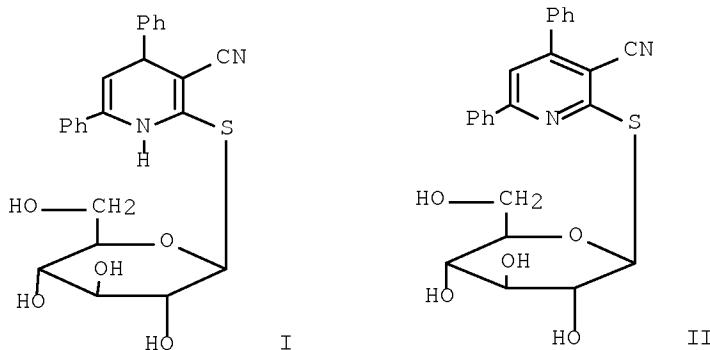
RN 371237-12-6 HCAPLUS

CN Benzeneacetic acid,  $\alpha$ -[ [3-cyano-4-phenyl-6-(2-thienyl)-2-pyridinyl]thio]- (CA INDEX NAME)



REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L57 ANSWER 5 OF 51 HCPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2003:552686 HCPLUS [Full-text](#)  
 DOCUMENT NUMBER: 139:350884  
 TITLE: A new class of dihydropyridine thioglycosides via piperidinium salts  
 AUTHOR(S): Attia, Adel M.; Elgemeie, Galal H.  
 CORPORATE SOURCE: Department of Chemistry, Faculty of Education, Kafr El-Sheikh, Egypt  
 SOURCE: Synthetic Communications (2003), 33(13), 2243-2255  
 CODEN: SYNCV; ISSN: 0039-7911  
 PUBLISHER: Marcel Dekker, Inc.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 139:350884  
 ED Entered STN: 20 Jul 2003  
 GI

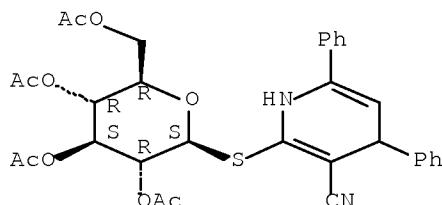


AB A first reported method for preparation of a new class of thioglycosides, e.g. (I, II), via reaction of piperidinium salts of dihydropyridinethiones with 2,3,4,6-tetra-O-acetyl- $\alpha$ -D-gluco- and galactopyranosyl bromides has been studied. Comparison with the products obtained from silylated thiopyridines is made. Aromatization of I to II was accomplished using EtOH/heat, or synthesis of the aromatic thioglycosides using pyridine thiones was an alternate route to II.

CC 33-3 (Carbohydrates)

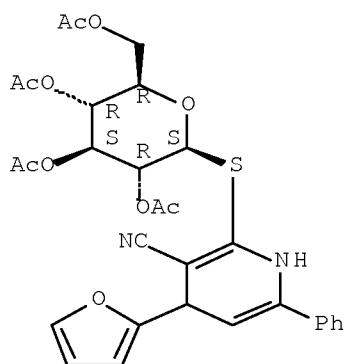
	Section cross-reference(s): 27				
IT	58327-74-5P	126888-03-7P	131841-89-9P	148859-87-4P	618386-55-3P
	618386-56-4P	618386-57-5P	618386-58-6P		
	618386-59-7P	618386-60-0P	618386-61-1P		
	618386-62-2P	618386-64-4P	618386-66-6P	618386-67-7P	
	618386-68-8P	618386-69-9P	618386-70-2P	618386-71-3P	
	618386-72-4P	618386-73-5P	618386-75-7P		
	618386-77-9P				
	RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)				
	(preparation of dihydropyridine thioglycosides from dihydropyridinethione piperidinium salts via SN2 coupling reaction and aromatization to pyridine derivs.)				
IT	618386-78-0P	618386-79-1P	618386-80-4P		
	618386-81-5P	618386-82-6P	618386-83-7P		
	618386-84-8P	618386-85-9P	618386-86-0P		
	618386-87-1P	618386-88-2P	618386-89-3P		
	RL: SPN (Synthetic preparation); PREP (Preparation)				
	(preparation of dihydropyridine thioglycosides from dihydropyridinethione piperidinium salts via SN2 coupling reaction and aromatization to pyridine derivs.)				
IT	618386-57-5P	618386-58-6P	618386-59-7P		
	618386-60-0P	618386-61-1P	618386-62-2P		
	618386-70-2P	618386-71-3P	618386-72-4P		
	618386-73-5P	618386-75-7P	618386-77-9P		
	RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)				
	(preparation of dihydropyridine thioglycosides from dihydropyridinethione piperidinium salts via SN2 coupling reaction and aromatization to pyridine derivs.)				
RN	618386-57-5	HCAPLUS			
CN	3-Pyridinecarbonitrile, 1,4-dihydro-4,6-diphenyl-2-[(2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl)thio]- (CA INDEX NAME)				

Absolute stereochemistry.



RN	618386-58-6	HCAPLUS
CN	3-Pyridinecarbonitrile, 4-(2-furanyl)-1,4-dihydro-6-phenyl-2-[(2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl)thio]- (CA INDEX NAME)	

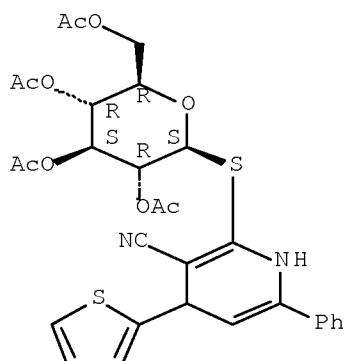
Absolute stereochemistry.



RN 618386-59-7 HCAPLUS

CN 3-Pyridinecarbonitrile, 1,4-dihydro-6-phenyl-2-[(2,3,4,6-tetra-O-acetyl-beta-D-glucopyranosyl)thio]-4-(2-thienyl)- (CA INDEX NAME)

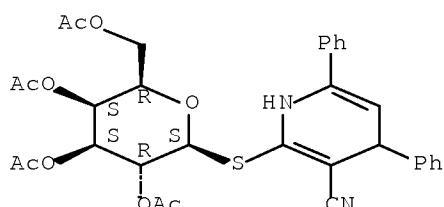
Absolute stereochemistry.



RN 618386-60-0 HCAPLUS

CN 3-Pyridinecarbonitrile, 1,4-dihydro-4,6-diphenyl-2-[(2,3,4,6-tetra-O-acetyl-beta-D-galactopyranosyl)thio]- (CA INDEX NAME)

Absolute stereochemistry.

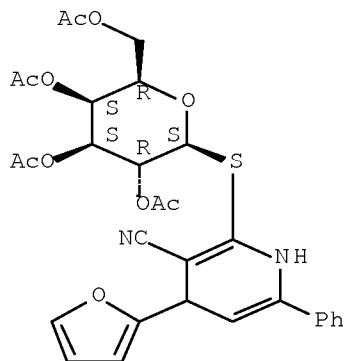


RN 618386-61-1 HCAPLUS

CN 3-Pyridinecarbonitrile, 4-(2-furanyl)-1,4-dihydro-6-phenyl-2-[(2,3,4,6-

tetra-O-acetyl- $\beta$ -D-galactopyranosyl)thio]- (CA INDEX NAME)

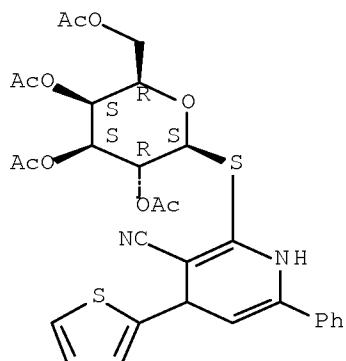
Absolute stereochemistry.



RN 618386-62-2 HCAPLUS

CN 3-Pyridinecarbonitrile, 1,4-dihydro-6-phenyl-2-[(2,3,4,6-tetra-O-acetyl- $\beta$ -D-galactopyranosyl)thio]-4-(2-thienyl)- (CA INDEX NAME)

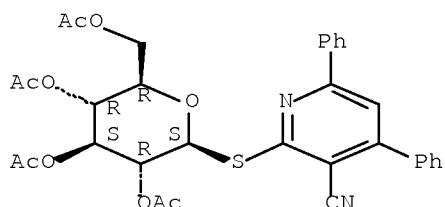
Absolute stereochemistry.



RN 618386-70-2 HCAPLUS

CN 3-Pyridinecarbonitrile, 4,6-diphenyl-2-[(2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl)thio]- (CA INDEX NAME)

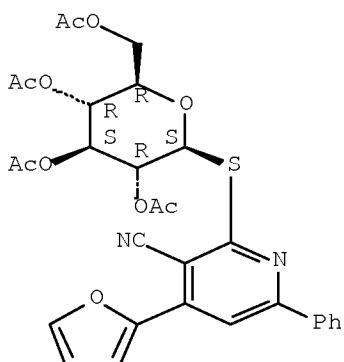
Absolute stereochemistry.



RN 618386-71-3 HCAPLUS

CN 3-Pyridinecarbonitrile, 4-(2-furanyl)-6-phenyl-2-[(2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl)thio]- (CA INDEX NAME)

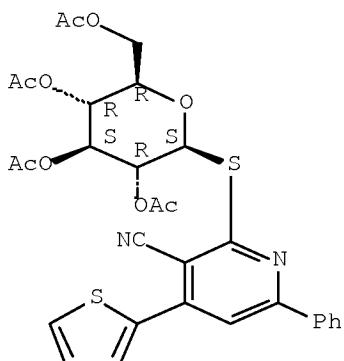
Absolute stereochemistry.



RN 618386-72-4 HCAPLUS

CN 3-Pyridinecarbonitrile, 6-phenyl-2-[(2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl)thio]-4-(2-thienyl)- (CA INDEX NAME)

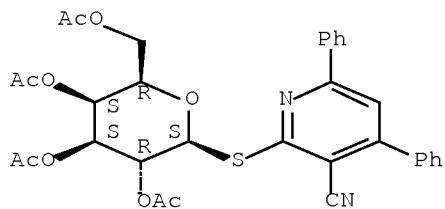
Absolute stereochemistry.



RN 618386-73-5 HCAPLUS

CN 3-Pyridinecarbonitrile, 4,6-diphenyl-2-[(2,3,4,6-tetra-O-acetyl- $\beta$ -D-galactopyranosyl)thio]- (CA INDEX NAME)

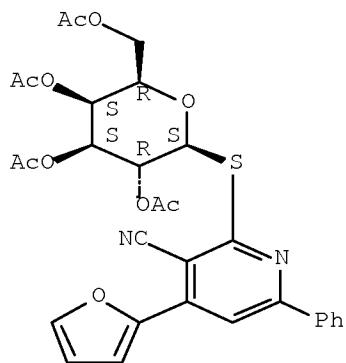
Absolute stereochemistry.



RN 618386-75-7 HCAPLUS

CN 3-Pyridinecarbonitrile, 4-(2-furanyl)-6-phenyl-2-[(2,3,4,6-tetra-O-acetyl-beta-D-galactopyranosyl)thio]- (CA INDEX NAME)

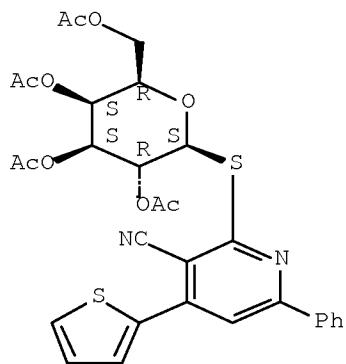
Absolute stereochemistry.



RN 618386-77-9 HCAPLUS

CN 3-Pyridinecarbonitrile, 6-phenyl-2-[(2,3,4,6-tetra-O-acetyl-beta-D-galactopyranosyl)thio]-4-(2-thienyl)- (CA INDEX NAME)

Absolute stereochemistry.



IT 618386-78-0P 618386-79-1P 618386-80-4P  
 618386-81-5P 618386-82-6P 618386-83-7P  
 618386-84-8P 618386-85-9P 618386-86-0P

618386-87-1P 618386-88-2P 618386-89-3P

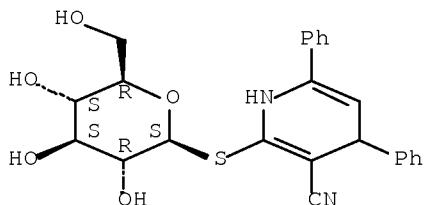
RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of dihydropyridine thioglycosides from dihydropyridinethione piperidinium salts via SN<sub>2</sub> coupling reaction and aromatization to pyridine derivs.)

RN 618386-78-0 HCPLUS

CN 3-Pyridinecarbonitrile, 2-( $\beta$ -D-glucopyranosylthio)-1,4-dihydro-4,6-diphenyl- (CA INDEX NAME)

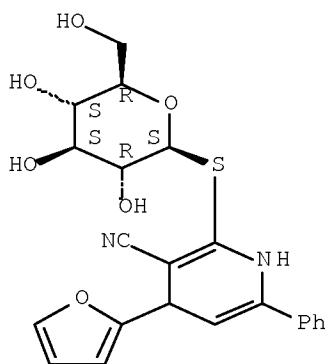
Absolute stereochemistry.



RN 618386-79-1 HCPLUS

CN 3-Pyridinecarbonitrile, 4-(2-furanyl)-2-( $\beta$ -D-glucopyranosylthio)-1,4-dihydro-6-phenyl- (CA INDEX NAME)

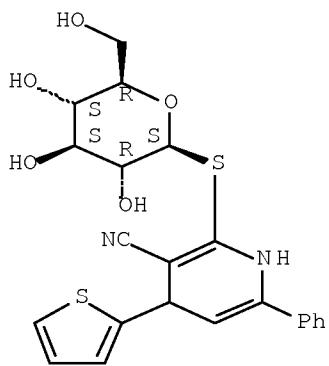
Absolute stereochemistry.



RN 618386-80-4 HCPLUS

CN 3-Pyridinecarbonitrile, 2-( $\beta$ -D-glucopyranosylthio)-1,4-dihydro-6-phenyl-4-(2-thienyl)- (CA INDEX NAME)

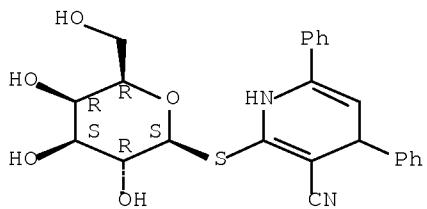
Absolute stereochemistry.



RN 618386-81-5 HCAPLUS

CN 3-Pyridinecarbonitrile, 2-( $\beta$ -D-galactopyranosylthio)-1,4-dihydro-4,6-diphenyl- (CA INDEX NAME)

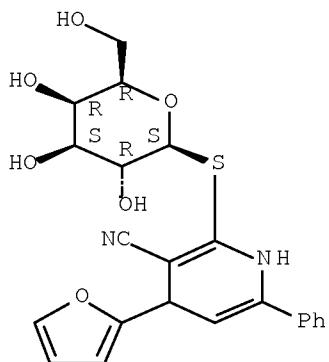
Absolute stereochemistry.



RN 618386-82-6 HCAPLUS

CN 3-Pyridinecarbonitrile, 4-(2-furanyl)-2-( $\beta$ -D-galactopyranosylthio)-1,4-dihydro-6-phenyl- (CA INDEX NAME)

Absolute stereochemistry.

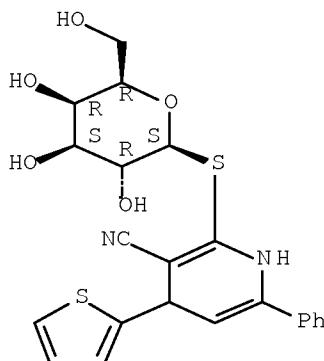


RN 618386-83-7 HCAPLUS

CN 3-Pyridinecarbonitrile, 2-( $\beta$ -D-galactopyranosylthio)-1,4-dihydro-6-

phenyl-4-(2-thienyl)- (CA INDEX NAME)

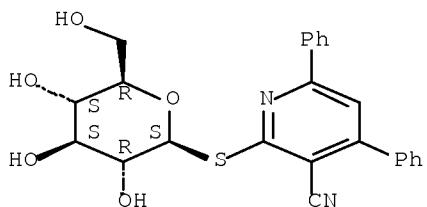
Absolute stereochemistry.



RN 618386-84-8 HCPLUS

CN 3-Pyridinecarbonitrile, 2-( $\beta$ -D-glucopyranosylthio)-4,6-diphenyl- (CA INDEX NAME)

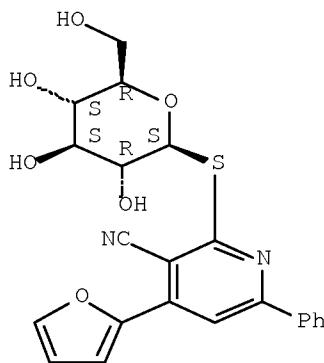
Absolute stereochemistry.



RN 618386-85-9 HCPLUS

CN 3-Pyridinecarbonitrile, 4-(2-furanyl)-2-( $\beta$ -D-glucopyranosylthio)-6-phenyl- (CA INDEX NAME)

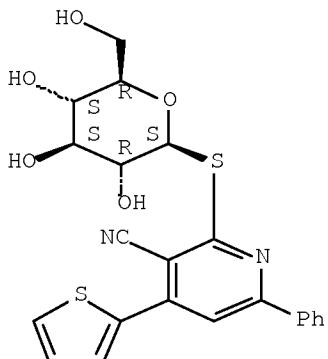
Absolute stereochemistry.



RN 618386-86-0 HCAPLUS

CN 3-Pyridinecarbonitrile, 2-( $\beta$ -D-glucopyranosylthio)-6-phenyl-4-(2-thienyl)- (CA INDEX NAME)

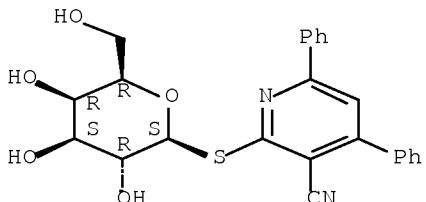
Absolute stereochemistry.



RN 618386-87-1 HCAPLUS

CN 3-Pyridinecarbonitrile, 2-( $\beta$ -D-galactopyranosylthio)-4,6-diphenyl- (CA INDEX NAME)

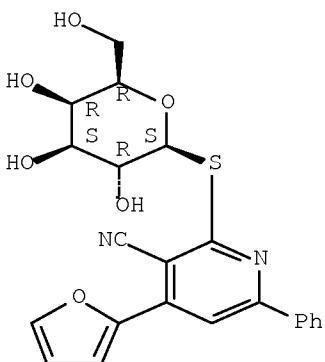
Absolute stereochemistry.



RN 618386-88-2 HCAPLUS

CN 3-Pyridinecarbonitrile, 4-(2-furanyl)-2-( $\beta$ -D-galactopyranosylthio)-6-phenyl- (CA INDEX NAME)

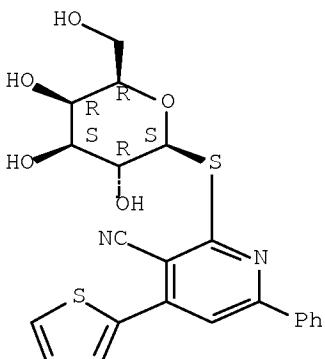
Absolute stereochemistry.



RN 618386-89-3 HCAPLUS

CN 3-Pyridinecarbonitrile, 2-( $\beta$ -D-galactopyranosylthio)-6-phenyl-4-(2-thienyl)- (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L57 ANSWER 6 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:30560 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 140:357615

TITLE: Reactions of N-(2-chloroacetyl)- $\alpha$ -amino acids with 3-cyanopyridine-2(1H)-thiones. New promising route to 3,4-dihydropyrido[3',2':4,5]thieno[3,2-e][1,4]diazepine-2(1H),5-diones

AUTHOR(S): Fedorov, A. E.; Shestopalov, A. M.; Belyakov, P. A.  
CORPORATE SOURCE: N. D. Zelinsky Institute of Organic Chemistry, Russian Academy of Sciences, Moscow, 119991, Russia

SOURCE: Russian Chemical Bulletin (Translation of Izvestiya Akademii Nauk, Seriya Khimicheskaya) (2003), 52(10), 2197-2202

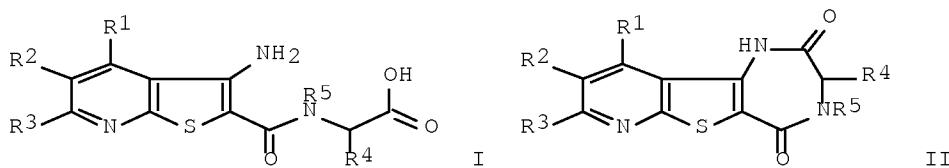
PUBLISHER: Kluwer Academic/Consultants Bureau  
DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 140:357615

ED Entered STN: 14 Jan 2004

GT



AB The reactions of N-(2-chloroacetyl)- $\alpha$ -amino acids with 3-cyanopyridine-2(1H)-thiones afforded N-[3-aminothieno[2,3-b]pyridin-2-ylcarbonyl]- $\alpha$ -amino acids I [R1 = Me, H, CF<sub>3</sub>, Ph; R2 = H, Ac, CN; R3 = Me, 4-pyridyl, NH<sub>2</sub>, Ph, 2-thienyl, CF<sub>3</sub>; R4 = H, Me, Me<sub>2</sub>CH, PhCH<sub>2</sub> and R5 = H or R4R5 = (CH<sub>2</sub>)<sub>3</sub>]. Heating the latter smoothly produced 3,4-dihydropyrido[3',2':4,5]thieno[3,2-e][1,4]diazepine-2(1H),5-diones II in high yields.

## CC 34-2 (Amino Acids, Peptides, and Proteins)

Section cross-reference(s): 28

IT 691-80-5P 721-65-3P 2279-16-5P 6319-96-6P 23500-10-9P

128918-14-9P 385417-58-3P 445266-78-4P 682334-29-8P 682334-30-1P

682334-31-2P 682334-32-3P 682334-33-4P 682334-34-5P

~~682334-35-6P~~ ~~682334-36-7P~~ ~~682334-38-9P~~ ~~682334-39-0P~~ ~~682334-40-3P~~

682334-41-4P    682334-42-5P    682334-43-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

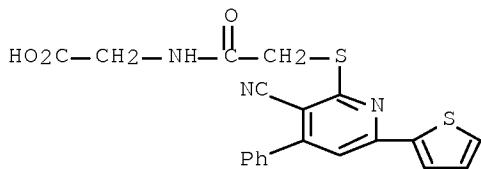
(reactions of chloroacetyl amino acids with cyanopyridinethiones in synthesis of dihydropyridothenodiazepinediones)

IT 682334-33-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

BN 682334-33-4 HCAPLUS

CN Glycine, N-[[[3-cyano-4-phenyl-6-(2-thienyl)-2-pyridinyl]thio]acetyl]-  
(9CI) (CA INDEX NAME)



REFERENCE COUNT:

47

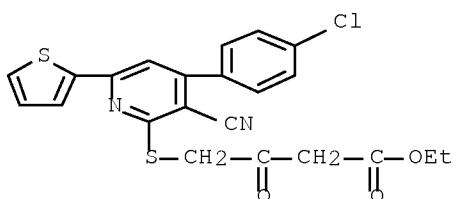
THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT.

L57 ANSWER 7 OF 51 HCPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2004:30559 HCPLUS Full-text  
DOCUMENT NUMBER: 141:225268

TITLE: 4-(3-Cyanopyridin-2-ylthio)acetoacetates in synthesis  
 of heterocycles  
 AUTHOR(S): Rodinovskaya, L. A.; Shestopalov, A. M.; Gromova, A.  
 V.  
 CORPORATE SOURCE: N. D. Zelinsky Institute of Organic Chemistry, Russian  
 Academy of Sciences, Moscow, 119991, Russia  
 SOURCE: Russian Chemical Bulletin (Translation of Izvestiya  
 Akademii Nauk, Seriya Khimicheskaya) (2003),  
 52(10), 2185-2196  
 CODEN: RCBUEY; ISSN: 1066-5285  
 PUBLISHER: Kluwer Academic/Consultants Bureau  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 141:225268  
 ED Entered STN: 14 Jan 2004  
 AB Substituted 2-amino-4-aryl-3-cyano-5-oxo-5,6-dihydro-4H-pyrano[2,3-d]pyrido[3',2':4,5]thieno[3,2-b]pyridines were synthesized by the reactions of 4-hydroxy-1H-thieno[2,3-b;4,5-b]dipyridin-2-ones with arylidenemalononitriles or by the three-component reactions of hydroxythienodipyridinones with aldehydes and malononitrile in DMF in the presence of triethylamine. Methods for syntheses of substituted 3-alkoxycarbonyl-6-amino-4-aryl-2-(3-cyanopyridin-2-ylthiomethyl)-4H-pyrans were developed on the basis of the reactions of 4-(3-cyanopyridin-2-ylthio)acetoacetates and arylidenemalononitriles or aldehydes and malononitrile. Et 4-(3-cyanopyridin-2-ylthio)acetoacetate and 4-methoxybenzylidenecyanothioacetamide were used for the synthesis of 6-(pyridin-2-ylthiomethyl)-3-cyanopyridine-2(1H)-thione.  
 CC 27-16 (Heterocyclic Compounds (One Hetero Atom))  
 IT 263890-55-7P 290299-61-5P 290299-63-7P 290299-71-7P  
 290299-83-1P 290299-89-7P 290299-93-3P 327070-70-2P 327167-61-3P  
 332099-30-6P 339158-73-5P 339158-74-6P 339158-76-8P 340808-52-8P  
 340813-16-3P 340813-19-6P 445390-62-5P 445390-63-6P 488725-51-5P  
 625366-60-1P 625371-18-8P 625372-26-1P 674805-81-3P 674805-82-4P  
 674805-84-6P 674805-91-5P 746638-39-1P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation of substituted  
 aminoarylcyanooxodihydropyranopyridothienopyridi  
 nes via reactions of hydroxythienodipyridinones with arylidene  
 malononitriles or via reactions of hydroxythienodipyridinones with  
 aldehydes and malononitrile)  
 IT 298217-13-7P 316361-74-7P 317844-82-9P 327170-02-5P  
 330180-52-4P 330853-34-4P 339580-55-1P 352662-78-3P 354554-90-8P  
 354556-65-3P 354556-66-4P 445222-21-9P 445384-31-6P 445384-32-7P  
 445384-77-0P 445385-25-1P 445390-92-1P 625366-16-7P 625366-78-1P  
 625366-84-9P 625372-22-7P 625372-23-8P 625375-71-5P 664999-93-3P  
 746638-37-9P 746638-38-0P 746638-40-4P 746638-41-5P 746638-42-6P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of substituted  
 aminoarylcyanooxodihydropyranopyridothienopyridi  
 nes via reactions of hydroxythienodipyridinones with arylidene  
 malononitriles or via reactions of hydroxythienodipyridinones with  
 aldehydes and malononitrile)  
 IT 290299-71-7P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation of substituted  
 aminoarylcyanooxodihydropyranopyridothienopyridi  
 nes via reactions of hydroxythienodipyridinones with arylidene  
 malononitriles or via reactions of hydroxythienodipyridinones with  
 aldehydes and malononitrile)

RN 290299-71-7 HCPLUS

CN Butanoic acid, 4-[[4-(4-chlorophenyl)-3-cyano-6-(2-thienyl)-2-pyridinyl]thio]-3-oxo-, ethyl ester (CA INDEX NAME)



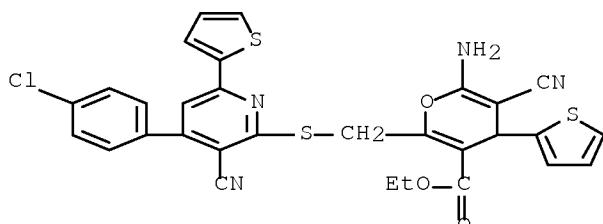
IT 316361-74-7P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of substituted

aminoarylcyanooxodihydropyranopyridothienopyridines via reactions of hydroxythienodipyridinones with arylidene malononitriles or via reactions of hydroxythienodipyridinones with aldehydes and malononitrile)

RN 316361-74-7 HCPLUS

CN 4H-Pyran-3-carboxylic acid, 6-amino-2-[[4-(4-chlorophenyl)-3-cyano-6-(2-thienyl)-2-pyridinyl]thiomethyl]-5-cyano-4-(2-thienyl)-, ethyl ester (CA INDEX NAME)



REFERENCE COUNT:

19

THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L57 ANSWER 8 OF 51 HCPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:994927 HCPLUS Full-text

DOCUMENT NUMBER: 140:287674

TITLE: Reactions of (S)-N-trifluoroacetyl-5-bromo-4-oxonorvaline methyl ester with vicinal mercaptonitriles. Synthesis of  $\delta$ -hetaryl-substituted  $\alpha$ -amino acids

AUTHOR(S): Fedorov, A. E.; Shestopalov, A. M.; Belyakov, P. A.

CORPORATE SOURCE: N. D. Zelinsky Institute of Organic Chemistry, Russian Academy of Sciences, Moscow, 119991, Russia

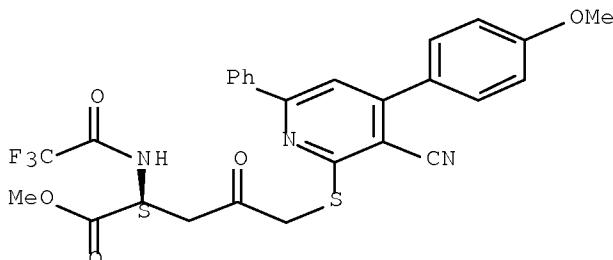
SOURCE: Russian Chemical Bulletin (Translation of Izvestiya Akademii Nauk, Seriya Khimicheskaya) (2003), 52(9), 2063-2069

CODEN: RCBUEY; ISSN: 1066-5285

PUBLISHER: Kluwer Academic/Consultants Bureau

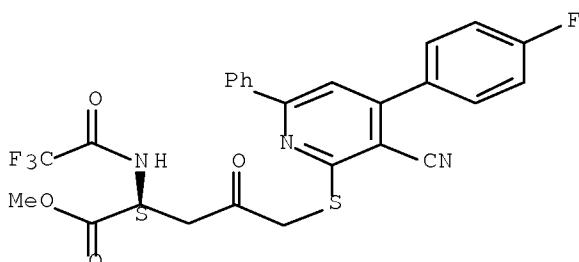
DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 140:287674  
 ED Entered STN: 22 Dec 2003  
 AB The reactions of (S)-N-trifluoroacetyl-5-bromo-4-oxonorvaline Me ester with vicinal mercaptonitriles afforded  $\delta$ -hetaryl-N-trifluoroacetyl- substituted  $\alpha$ -amino acids (hetaryl is thiazol-2-yl, 2-thienyl, or thieno[2,3-b]pyridin-6-yl).  
 CC 34-2 (Amino Acids, Peptides, and Proteins)  
 IT 488783-76-2P 676165-42-7P 676165-48-3P 676165-52-9P  
676165-53-0P 676165-54-1P 676165-55-2P 676165-56-3P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
     (synthesis of  $\delta$ -heteroaryl  $\alpha$ -amino acids from trifluoroacetyl bromooxonorvaline and vicinal mercaptonitriles)  
 IT 676165-52-9P 676165-53-0P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
     (synthesis of  $\delta$ -heteroaryl  $\alpha$ -amino acids from trifluoroacetyl bromooxonorvaline and vicinal mercaptonitriles)  
 RN 676165-52-9 HCAPLUS  
 CN L-Norvaline, 5-[[3-cyano-4-(4-methoxyphenyl)-6-phenyl-2-pyridinyl]thio]-4-oxo-N-(trifluoroacetyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 676165-53-0 HCAPLUS  
 CN L-Norvaline, 5-[[3-cyano-4-(4-fluorophenyl)-6-phenyl-2-pyridinyl]thio]-4-oxo-N-(trifluoroacetyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L57 ANSWER 9 OF 51 HCPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2004:526798 HCPLUS Full-text  
 DOCUMENT NUMBER: 141:410788  
 TITLE: Synthesis and electrochemical oxidation of nitriles of 4-aryl-2-carbamoylmethylthio-5-ethoxycarbonyl-1,4-dihydropyridine-3-carboxylic acids  
 AUTHOR(S): Baumane, L.; Krauze, A.; Chernova, L.; Sile, L.; Duburs, G.; Stradins, J.  
 CORPORATE SOURCE: Latvian Institute of Organic Synthesis, Riga, LV-1006, Latvia  
 SOURCE: Chemistry of Heterocyclic Compounds (New York, NY, United States) (Translation of Khimiya Geterotsiklicheskikh Soedinenii) (2003), 39(12), 1591-1599  
 CODEN: CHCCAL; ISSN: 0009-3122  
 PUBLISHER: Kluwer Academic/Consultants Bureau  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 141:410788  
 ED Entered STN: 01 Jul 2004  
 AB Nitriles of 4-aryl-2-carbamoylmethylthio-5-ethoxycarbonyl-6-hydroxy- 1,4,5,6-tetrahydropyridine-3-carboxylic acids were obtained by the alkylation of 1,4,5,6-tetrahydropyridine-2-thiolate with iodoacetamide or by a three-component synthesis by condensing 2-arylmethylene-1,3-dicarbonyl compds. with 2-cyanothioacetamide in the presence of piperidine with subsequent reaction with iodoacetamide. Nitriles of 4-aryl-2-carbamoylmethylthio-5-ethoxycarbonyl-1,4-dihydropyridine-3-carboxylic acids were obtained by the dehydration of 6-hydroxy-1,4,5,6-tetrahydropyridines or with a one-reactor three-component system from 2-cyano-3-(4-methoxyphenyl)thioacrylamide, 1,3-dicarbonyl compds., and iodoacetamide. The electrochem. oxidation of the synthesized nitriles was investigated and it was established that derivs. of 1,4,5,6-tetrahydropyridine as a rule are oxidized readily to the corresponding 1,4-dihydropyridines. A comparative anal. has been carried out of the ability of hydrogenated pyridines to be oxidized electrochem. depending on the electron-withdrawing properties of the substituents in the heterocycle.  
 CC 27-16 (Heterocyclic Compounds (One Hetero Atom))  
 Section cross-reference(s): 22  
 IT 111853-33-9 111853-41-9 417709-57-0 417709-58-1  
417709-59-2  
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)  
 (synthesis and electrochem. oxidation of nitriles of 4-aryl-2-carbamoylmethylthio-5-ethoxycarbonyl-1,4-dihydropyridine-3-carboxylic acids)  
 IT 793683-47-3P 793683-48-4P 793683-49-5P 793683-50-8P  
 793683-51-9P 793683-52-0P 793683-53-1P  
793683-54-2P  
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)  
 (synthesis and electrochem. oxidation of nitriles of 4-aryl-2-carbamoylmethylthio-5-ethoxycarbonyl-1,4-dihydropyridine-3-carboxylic acids)  
 IT 628685-15-4  
 RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)  
 (synthesis and electrochem. oxidation of nitriles of 4-aryl-2-

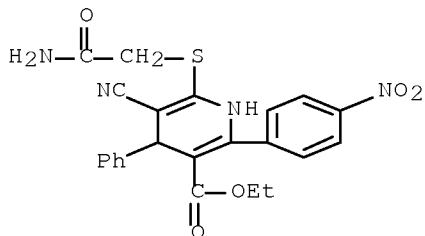
carbamoylmethylthio-5-ethoxycarbonyl-1,4-dihydropyridine-3-carboxylic acids)

IT 417709-57-0 417709-58-1 417709-59-2  
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)

(synthesis and electrochem. oxidation of nitriles of 4-aryl-2-carbamoylmethylthio-5-ethoxycarbonyl-1,4-dihydropyridine-3-carboxylic acids)

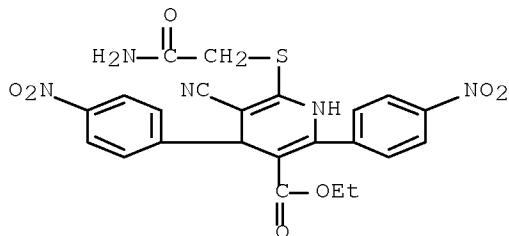
RN 417709-57-0 HCPLUS

CN 3-Pyridinecarboxylic acid, 6-[(2-amino-2-oxoethyl)thio]-5-cyano-1,4-dihydro-2-(4-nitrophenyl)-4-phenyl-, ethyl ester (CA INDEX NAME)



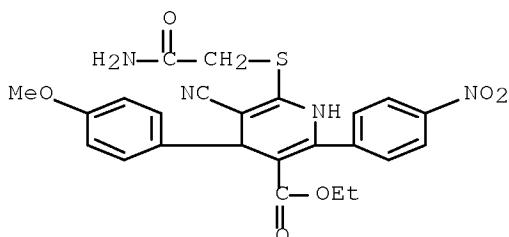
RN 417709-58-1 HCPLUS

CN 3-Pyridinecarboxylic acid, 6-[(2-amino-2-oxoethyl)thio]-5-cyano-1,4-dihydro-2,4-bis(4-nitrophenyl)-, ethyl ester (CA INDEX NAME)



RN 417709-59-2 HCPLUS

CN 3-Pyridinecarboxylic acid, 6-[(2-amino-2-oxoethyl)thio]-5-cyano-1,4-dihydro-4-(4-methoxyphenyl)-2-(4-nitrophenyl)-, ethyl ester (CA INDEX NAME)

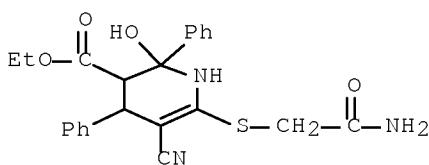


IT 793683-48-4P 793683-49-5P 793683-52-0P  
793683-53-1P 793683-54-2P

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)  
(synthesis and electrochem. oxidation of nitriles of 4-aryl-2-carbamoylmethylthio-5-ethoxycarbonyl-1,4-dihydropyridine-3-carboxylic acids)

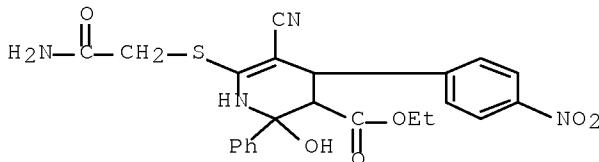
RN 793683-48-4 HCAPLUS

CN 3-Pyridinecarboxylic acid, 6-[(2-amino-2-oxoethyl)thio]-5-cyano-1,2,3,4-tetrahydro-2-hydroxy-2,4-diphenyl-, ethyl ester (CA INDEX NAME)



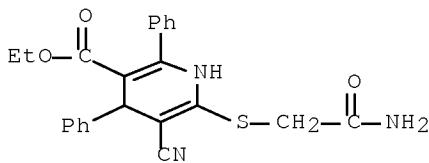
RN 793683-49-5 HCAPLUS

CN 3-Pyridinecarboxylic acid, 6-[(2-amino-2-oxoethyl)thio]-5-cyano-1,2,3,4-tetrahydro-2-hydroxy-4-(4-nitrophenyl)-2-phenyl-, ethyl ester (CA INDEX NAME)



RN 793683-52-0 HCAPLUS

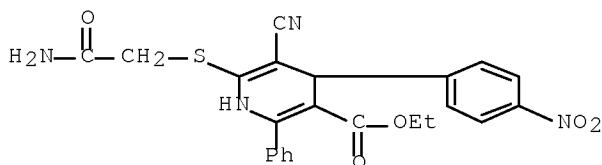
CN 3-Pyridinecarboxylic acid, 6-[(2-amino-2-oxoethyl)thio]-5-cyano-1,4-dihydro-2,4-diphenyl-, ethyl ester (CA INDEX NAME)



RN 793683-53-1 HCAPLUS

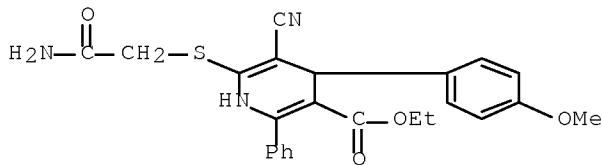
CN 3-Pyridinecarboxylic acid, 6-[(2-amino-2-oxoethyl)thio]-5-cyano-1,4-

dihydro-4-(4-nitrophenyl)-2-phenyl-, ethyl ester (CA INDEX NAME)



RN 793683-54-2 HCPLUS

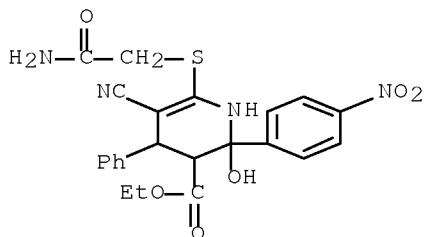
CN 3-Pyridinecarboxylic acid, 6-[(2-amino-2-oxoethyl)thio]-5-cyano-1,4-dihydro-4-(4-methoxyphenyl)-2-phenyl-, ethyl ester (CA INDEX NAME)

IT 628685-15-4

RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)  
 (synthesis and electrochem. oxidation of nitriles of 4-aryl-2-carbamoylmethylthio-5-ethoxycarbonyl-1,4-dihydropyridine-3-carboxylic acids)

RN 628685-15-4 HCPLUS

CN 3-Pyridinecarboxylic acid, 6-[(2-amino-2-oxoethyl)thio]-5-cyano-1,2,3,4-tetrahydro-2-hydroxy-2-(4-nitrophenyl)-4-phenyl-, ethyl ester (CA INDEX NAME)



REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L57 ANSWER 10 OF 51 HCPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:781885 HCPLUS Full-text

DOCUMENT NUMBER: 140:321332

TITLE: Synthesis and Reactions of Some Fused Oxazinone, Pyrimidinone, Thiopyrimidinone, and Triazinone

AUTHOR(S): Derivatives with a Thiophene Ring as Analgesic, Anticonvulsant, and Antiparkinsonian Agents  
 Amr, Abdel-Galil E.; Hegab, Mohamed I.; Ibrahem, Alhusain A.; Abdulla, Mohamed M.

CORPORATE SOURCE: Organic Chemistry Dept., National Research Center, Cairo, Egypt

SOURCE: Monatshefte fuer Chemie (2003), 134(10), 1395-1409  
 CODEN: MOCMB7; ISSN: 0026-9247  
 PUBLISHER: Springer-Verlag Wien

DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 140:321332

ED Entered STN: 06 Oct 2003

AB A series of 2,6-disubstituted pyridine ester derivs. and the corresponding amides were prepared. The esters were hydrolyzed to the sodium salts, which were treated with acetic anhydride to afford oxazinone derivs. These were treated with ammonium acetate to afford 2-methylpyrimidinone derivs., which were methylated to yield 2,3-dimethylpyrimidinone derivs. In addition, they were reacted with aniline or hydrazine hydrate to give 3-phenyl- or 3-aminopyrimidinone derivs. The latter reacted with 2-thiophenecarbaldehyde or phthalic anhydride to afford the corresponding Schiff's base and imide derivs. Diazotization of amides gave thienotriazinone derivs., which were treated with Et iodide to afford the corresponding 3-ethyltriazinone derivs. Also, they were reacted with Ph isothiocyanate to give the corresponding thiopyrimidinone derivs., which were alkylated with Et iodide or chloroacetic acid to afford the corresponding thioethyl- or thioglycolic acid pyrimidinone derivs. The pharmacol. screening showed that many of these obtained compds. have good analgesic, anticonvulsant, and antiparkinsonian activities comparable to Voltaren, Carbamazepine, and Benzotropene as reference drugs.

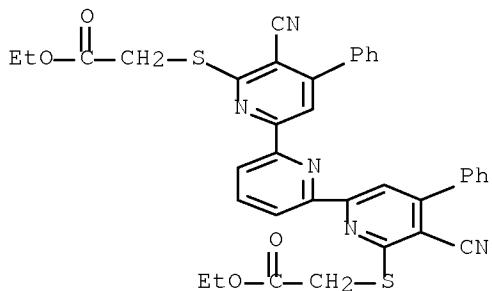
CC 28-19 (Heterocyclic Compounds (More Than One Hetero Atom))  
 Section cross-reference(s): 1

IT 678145-36-3P 678145-38-5P 678145-40-9P 678145-41-0P  
 678145-43-2P 678145-44-3P 678145-46-5P 678145-47-6P 678145-48-7P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of pyridothieno-fused oxazinone, pyrimidinone, thiopyrimidinone, and triazinone derivs. as analgesic, anticonvulsant, and antiparkinsonian agents)

IT 678145-38-5P 678145-40-9P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of pyridothieno-fused oxazinone, pyrimidinone, thiopyrimidinone, and triazinone derivs. as analgesic, anticonvulsant, and antiparkinsonian agents)

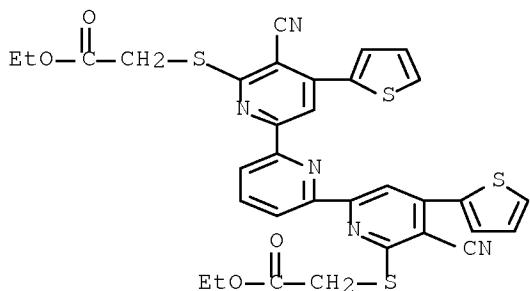
RN 678145-38-5 HCPLUS

CN Acetic acid, 2,2'-(5,5''-dicyano-4,4''-diphenyl[2,2':6',2''-terpyridine]-6,6''-diyl)bis(thio)]bis-, diethyl ester (9CI) (CA INDEX NAME)



RN 678145-40-9 HCAPLUS

CN Acetic acid, 2,2'-(5,5''-dicyano-4,4''-di-2-thienyl[2,2':6',2''-terpyridine]-6,6''-diyl)bis(thio)bis-, diethyl ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L57 ANSWER 11 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2002:979753 HCAPLUS Full-text

DOCUMENT NUMBER: 139:22191

TITLE: Some Reactions of 2-Functionalized  
3-Amino-4-aryl-6-(2'-thienyl)-thieno[2,3-b]pyridines:  
Synthesis of New Pyridothienopyrimidines,  
Pyridothienotriazines and Related Fused Tetracyclic  
Systems

AUTHOR(S): Abdel-Rahman, A. E.; Bakhite, E. A.; Mohamed, O. S.; Thabet, E. A.

CORPORATE SOURCE: Faculty of Science, Chemistry Department, Assiut University, Assiut, Egypt

SOURCE: Phosphorus, Sulfur and Silicon and the Related Elements (2003), 178(1), 89-106

CODEN: PSSLEC; ISSN: 1042-6507

PUBLISHER: Taylor &amp; Francis Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

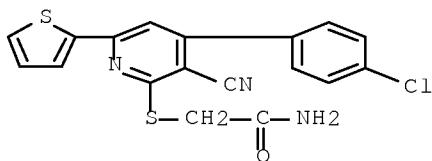
OTHER SOURCE(S): CASREACT 139:22191

ED Entered STN: 30 Dec 2002

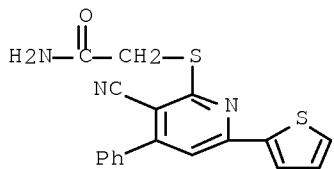
AB 4-Aryl-3-cyano-6-(2'-thienyl)-pyridine-2(1H)-thiones were prepared and treated with chloroacetonitrile or chloroacetamide to furnish 3-amino-4-aryl-6-(2'-

thienyl)-thieno[2,3-b]pyridine-2-carbonitriles and 2-carboxamide analogs, resp. The reaction of these compds. with a variety of reagents namely, formamide, carbon disulfide, Ph isothiocyanate, ethylene diamine, sodium azide, tri-Et orthoformate, and nitrous acid have been carried out and their products were identified. Most of these products were subjected to further reactions to obtain the rest of the title compds.

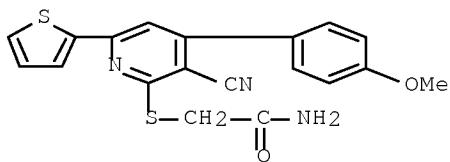
CC	28-20 (Heterocyclic Compounds (More Than One Hetero Atom))
IT	82127-11-5P 82127-15-9P 82127-20-6P 82127-22-8P 82137-61-9P <u>128342-41-6P</u> <u>296798-15-7P</u> 299165-55-2P 299168-73-3P <u>299440-71-4P</u> <u>313380-19-7P</u> 330182-01-9P 539829-71-5P 539829-83-9P 539829-92-0P 539829-94-2P 539830-09-6P 539830-11-0P 539830-15-4P 539830-25-6P
	RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (reactions of functionalized (amino)(aryl)(thienyl)thieno[2,3-b]pyridines and preparation of pyridothienopyrimidines, pyridothienotriazines and related fused tetracyclic compds.)
IT	<u>296798-15-7P</u> <u>299440-71-4P</u> <u>313380-19-7P</u> RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (reactions of functionalized (amino)(aryl)(thienyl)thieno[2,3-b]pyridines and preparation of pyridothienopyrimidines, pyridothienotriazines and related fused tetracyclic compds.)
RN	296798-15-7 HCPLUS
CN	Acetamide, 2-[4-(4-chlorophenyl)-3-cyano-6-(2-thienyl)-2-pyridinyl]thio]- (CA INDEX NAME)



RN	299440-71-4 HCPLUS
CN	Acetamide, 2-[4-(4-chlorophenyl)-3-cyano-6-(2-thienyl)-2-pyridinyl]thio]- (CA INDEX NAME)

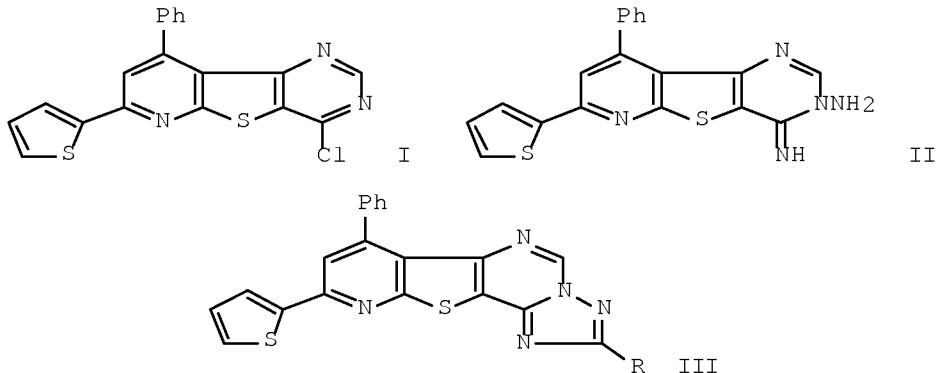


RN	313380-19-7 HCPLUS
CN	Acetamide, 2-[3-cyano-4-(4-methoxyphenyl)-6-(2-thienyl)-2-pyridinyl]thio]- (CA INDEX NAME)



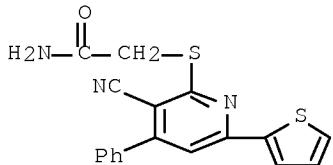
REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L57 ANSWER 12 OF 51 HCPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2003:357354 HCPLUS [Full-text](#)  
 DOCUMENT NUMBER: 139:230708  
 TITLE: Synthesis of some new pyridothienopyrimidines and related [1,2,4]triazolopyridothienopyrimidines  
 AUTHOR(S): Bakhite, E. A.; Abdel-Rahman, A. E.; Mohamed, O. S.; Thabet, E. A.  
 CORPORATE SOURCE: Chemistry Department, Faculty of Science, Assiut University, Assiut, 71516, Egypt  
 SOURCE: Journal of Chemical Research, Synopses (2003), (2), 58-59, 0236-0247  
 CODEN: JRPSDC; ISSN: 0308-2342  
 PUBLISHER: Science Reviews  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 139:230708  
 ED Entered STN: 12 May 2003  
 GI



AB 4-Chloro-9-phenyl-7-(2-thienyl)pyrido[3',2':4,5]thieno[3,2-d]pyrimidine (I) and 3-amino-9-phenyl-7-(2-thienyl)pyrido[3',2':4,5]thieno[3,2-d]pyrimidine (II) were prepared and employed as precursors for synthesizing the title fused-ring compds., e.g., III (R = CH<sub>2</sub>COOEt, Ph).  
 CC 28-16 (Heterocyclic Compounds (More Than One Hetero Atom))  
 IT 82137-61-9P [299440-71-4P](#) 594859-44-6P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intermediate, heterocyclization of; new pyridothienopyrimidines and related [1,2,4]triazolopyridothienopyrimidines)  
IT 299440-71-4P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(intermediate, heterocyclization of; new pyridothienopyrimidines and related [1,2,4]triazolopyridothienopyrimidines)  
RN 299440-71-4 HCPLUS  
CN Acetamide, 2-[[3-cyano-4-phenyl-6-(2-thienyl)-2-pyridinyl]thio]- (CA INDEX NAME)



REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L57 ANSWER 13 OF 51 HCPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2003:26725 HCPLUS Full-text  
DOCUMENT NUMBER: 138:385404  
TITLE: Synthesis and reactions of new thienopyridines,  
pyridothienopyrimidines and pyridothienotriazines  
Bakhite, E. A.; Abdel-Rahman, A. E.; Mohamed, O. S.;  
Thabet, E. A.  
CORPORATE SOURCE: Chemistry Department, Faculty of Science, Assiut  
University, Assiut, 71516, Egypt  
SOURCE: Bulletin of the Korean Chemical Society (2002  
), 23(12), 1709-1714  
CODEN: BKCSDE; ISSN: 0253-2964  
PUBLISHER: Korean Chemical Society  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 138:385404  
ED Entered STN: 13 Jan 2003  
GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The reaction of 1,2-dihydro-4-phenyl-6-(2-thienyl)-2-thioxo-3-Pyridinecarbonitrile derivs. I (R = H, OMe, Cl) were reported. Compds. thus prepared included 3-amino-N-aryl-4-phenyl-6-(2-thienyl)thieno[2,3-b]pyridine-2-carboxamide derivs. II (R = H, Me, Cl; X = CH, N). Compds. II underwent a different sequence of reactions to produce a variety of thienylpyridothienopyrimidinones III (R = H, Me, Cl; X = CH, N) and thienylpyridothienotriazines. Some of the prepared compds. were tested in vitro for their antimicrobial activities.  
CC 28-20 (Heterocyclic Compounds (More Than One Hetero Atom))  
Section cross-reference(s): 1, 10

ST pyridinecarbonitrile thienyl prep antimicrobial  
antibacterial antifungal; thienopyridinyl ketone thienyl prep antimicrobial  
antibacterial antifungal; thienopyridinecarboxamide thienyl prep antimicrobial  
antibacterial antifungal; thienopyridopyrimidine thienyl prep antimicrobial  
antibacterial antifungal; thienopyridopyrimidinone thienyl prep antimicrobial  
antibacterial antifungal; pyridothienotriazine thienyl prep antimicrobial  
antibacterial antifungal; pyridothienotriazinone thienyl prep antimicrobial  
antibacterial antifungal

IT Antibacterial agents  
Antimicrobial agents  
Fungicides  
 (preparation and antimicrobial activity of  
 (thienyl)pyridinecarbonitriles, (thienyl)thienopyridinyl ketones,  
 (thienyl)thienopyridinecarboxamides and (thienyl)thienopyridopyrimidino  
 nes)

IT 372082-67-2P 522623-24-1P 522623-27-4P  
 522623-28-5P 522623-29-6P, 3-Amino-N,4-diphenyl-6-(2-thienyl)thieno[2,3-  
 b]pyridine-2-carboxamide 522623-32-1P 522623-41-2P  
 RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic  
 preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant  
 or reagent)  
 (preparation and antimicrobial activity of  
 (thienyl)pyridinecarbonitriles, (thienyl)thienopyridinyl ketones,  
 (thienyl)thienopyridinecarboxamides and (thienyl)thienopyridopyrimidino  
 nes)

IT 522623-33-2P 522623-36-5P 522623-38-7P 522623-40-1P 522623-42-3P  
 522623-45-6P 522623-46-7P 522623-48-9P  
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL  
 (Biological study); PREP (Preparation)  
 (preparation and antimicrobial activity of  
 (thienyl)pyridinecarbonitriles, (thienyl)thienopyridinyl ketones,  
 (thienyl)thienopyridinecarboxamides and (thienyl)thienopyridopyrimidino  
 nes)

IT 70-11-1, 2-Bromo-1-phenylethanone 122-51-0, 1,1',1''-[  
 Methylidynetris(oxy)]tris[ethane] 587-65-5, 2-Chloro-N-phenylacetamide  
 5221-37-4, 2-Chloro-N-(2-pyridinyl)acetamide 82127-11-5,  
 1,2-Dihydro-4-phenyl-6-(2-thienyl)-2-thioxo-3-Pyridinecarbonitrile  
 82127-15-9, 4-(4-Chlorophenyl)-1,2-dihydro-6-(2-thienyl)-2-thioxo-3-  
 Pyridinecarbonitrile 128342-41-6, 1,2-Dihydro-4-(4-methoxyphenyl)-6-(2-  
 thienyl)-2-thioxo-3-Pyridinecarbonitrile  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation and antimicrobial activity of  
 (thienyl)pyridinecarbonitriles, (thienyl)thienopyridinyl ketones,  
 (thienyl)thienopyridinecarboxamides and (thienyl)thienopyridopyrimidino  
 nes)

IT 522623-22-9P 522623-23-0P 522623-25-2P  
 522623-26-3P 522623-30-9P 522623-31-0P 522623-47-8P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation and antimicrobial activity of  
 (thienyl)pyridinecarbonitriles, (thienyl)thienopyridinyl ketones,  
 (thienyl)thienopyridinecarboxamides and (thienyl)thienopyridopyrimidino  
 nes)

IT 301847-16-5P 371214-05-0P 522623-34-3P 522623-35-4P 522623-37-6P  
 522623-39-8P 522623-43-4P 522623-44-5P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation and antimicrobial activity of

(thienyl)pyridinecarbonitriles, (thienyl)thienopyridinyl ketones, (thienyl)thienopyridinecarboxamides and (thienyl)thienopyridopyrimidinones)

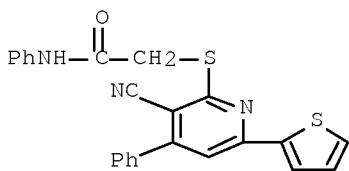
IT 372082-67-2P 522623-24-1P 522623-27-4P

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)

(preparation and antimicrobial activity of (thienyl)pyridinecarbonitriles, (thienyl)thienopyridinyl ketones, (thienyl)thienopyridinecarboxamides and (thienyl)thienopyridopyrimidinones)

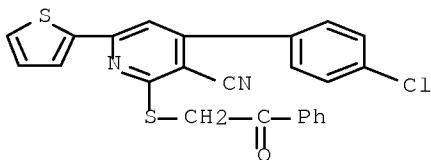
RN 372082-67-2 HCAPLUS

CN Acetamide, 2-[3-cyano-4-phenyl-6-(2-thienyl)-2-pyridinyl]thio]-N-phenyl- (CA INDEX NAME)



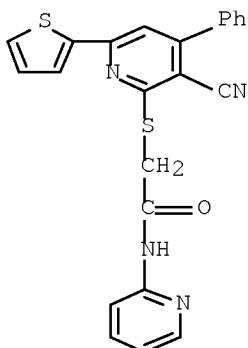
RN 522623-24-1 HCAPLUS

CN 3-Pyridinecarbonitrile, 4-(4-chlorophenyl)-2-[(2-oxo-2-phenylethyl)thio]-6-(2-thienyl)- (CA INDEX NAME)



RN 522623-27-4 HCAPLUS

CN Acetamide, 2-[3-cyano-4-phenyl-6-(2-thienyl)-2-pyridinyl]thio]-N-2-pyridinyl- (CA INDEX NAME)

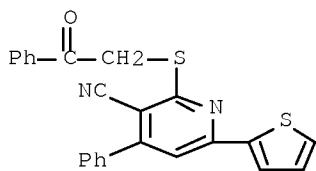


IT 522623-22-9P 522623-23-0P 522623-25-2P  
522623-26-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and antimicrobial activity of  
(thienyl)pyridinecarbonitriles, (thienyl)thienopyridinyl ketones,  
(thienyl)thienopyridinecarboxamides and (thienyl)thienopyridopyrimidinones)

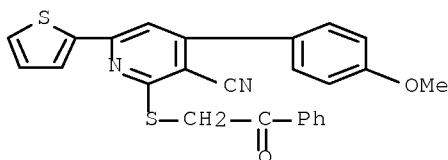
RN 522623-22-9 HCPLUS

CN 3-Pyridinecarbonitrile, 2-[ (2-oxo-2-phenylethyl)thio]-4-phenyl-6-(2-thienyl)- (CA INDEX NAME)



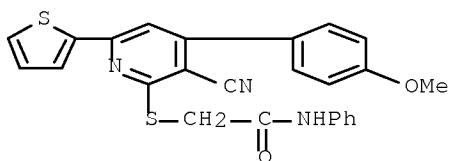
RN 522623-23-0 HCPLUS

CN 3-Pyridinecarbonitrile, 4-(4-methoxyphenyl)-2-[ (2-oxo-2-phenylethyl)thio]-6-(2-thienyl)- (CA INDEX NAME)

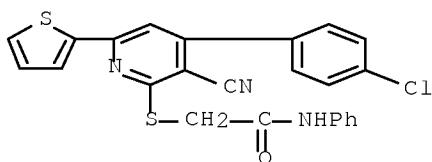


RN 522623-25-2 HCPLUS

CN Acetamide, 2-[3-cyano-4-(4-methoxyphenyl)-6-(2-thienyl)-2-pyridinyl]thio]-N-phenyl- (CA INDEX NAME)



RN 522623-26-3 HCPLUS  
 CN Acetamide, 2-[{4-(4-chlorophenyl)-3-cyano-6-(2-thienyl)-2-pyridinyl]thio]-N-phenyl- (CA INDEX NAME)

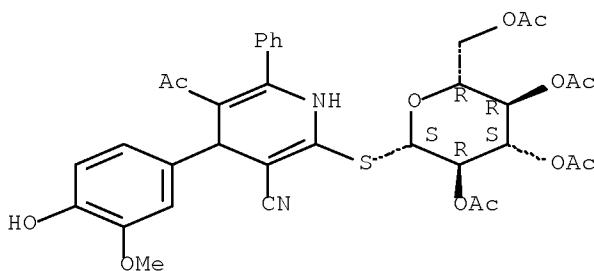


REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L57 ANSWER 14 OF 51 HCPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2002:95519 HCPLUS Full-text  
 DOCUMENT NUMBER: 137:20512  
 TITLE: Synthesis of thiopyridines and their hydrogenated thioglycosides via piperidinium salts  
 ATTIA, Adel M. E.  
 AUTHOR(S):  
 CORPORATE SOURCE: Faculty of Education, Department of Chemistry,  
 University of Tanta (Kafr El-Sheikh Branch), 33516,  
 Egypt  
 SOURCE: Tetrahedron (2002), 58(7), 1399-1405  
 CODEN: TETRAB; ISSN: 0040-4020  
 PUBLISHER: Elsevier Science Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 137:20512  
 ED Entered STN: 05 Feb 2002  
 AB The synthesis of several new thiopyridines and their hydrogenated thioglycosides via the reaction of piperidinium salts of dihydropyridinethiones with  $\alpha$ -halogeno sugars is described.  
 CC 33-3 (Carbohydrates)  
 Section cross-reference(s): 1, 27  
 IT 435333-25-8P 435333-27-0P 435333-29-2P 435333-31-6P 435333-34-9P  
 435333-37-2P 435333-40-7P 435333-43-0P 435333-46-3P  
 435333-48-5P 435333-50-9P 435333-52-1P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (synthesis of thiopyridines and their hydrogenated thioglycosides via piperidinium salts)  
 IT 435333-54-3P 435333-56-5P 435333-58-7P  
 435333-60-1P

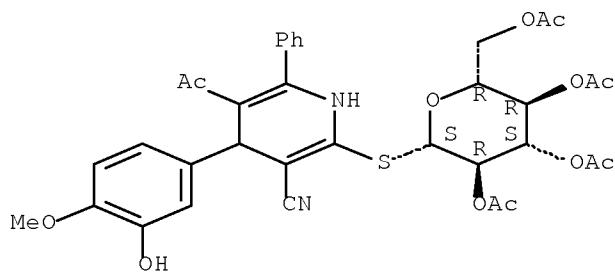
	RL: SPN (Synthetic preparation); PREP (Preparation) (synthesis of thiopyridines and their hydrogenated thioglycosides via piperidinium salts)
IT	<u>435333-62-3P</u> <u>435333-64-5P</u> <u>435333-66-7P</u> <u>435333-68-9P</u> <u>435333-70-3P</u> <u>435333-72-5P</u> <u>435333-74-7P</u> <u>435333-76-9P</u>
	RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent) (synthesis, antitumor activity, and antiviral activity against HIV-1 in MT-4 cells of thiopyridines and their hydrogenated thioglycosides via piperidinium salts)
IT	<u>435333-78-1P</u> <u>435333-80-5P</u> <u>435333-82-7P</u> <u>435333-85-0P</u> <u>435333-88-3P</u> <u>435333-90-7P</u> <u>435333-92-9P</u> <u>435333-94-1P</u>
	RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation) (synthesis, antitumor activity, and antiviral activity against HIV-1 in MT-4 cells of thiopyridines and their hydrogenated thioglycosides via piperidinium salts)
IT	<u>435333-46-3P</u> <u>435333-48-5P</u> <u>435333-50-9P</u> <u>435333-52-1P</u>
	RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (synthesis of thiopyridines and their hydrogenated thioglycosides via piperidinium salts)
RN	435333-46-3 HCPLUS
CN	3-Pyridinecarbonitrile, 5-acetyl-1,4-dihydro-4-(4-hydroxy-3-methoxyphenyl)-6-phenyl-2-[(2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl)thio]- (CA INDEX NAME)

Absolute stereochemistry.



RN	435333-48-5 HCPLUS
CN	3-Pyridinecarbonitrile, 5-acetyl-1,4-dihydro-4-(3-hydroxy-4-methoxyphenyl)-6-phenyl-2-[(2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl)thio]- (CA INDEX NAME)

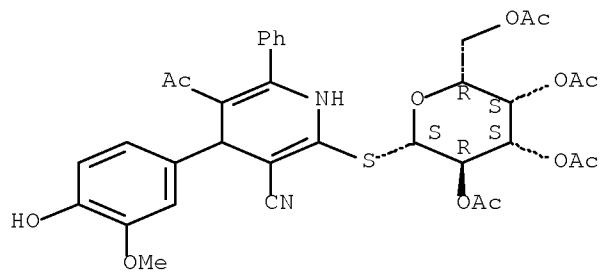
Absolute stereochemistry.



RN 435333-50-9 HCAPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-1,4-dihydro-4-(4-hydroxy-3-methoxyphenyl)-6-phenyl-2-[(2,3,4,6-tetra-O-acetyl-beta-D-galactopyranosyl)thio]- (CA INDEX NAME)

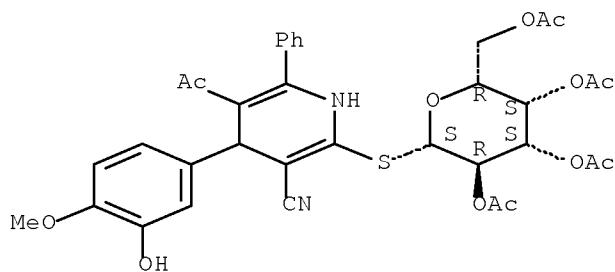
Absolute stereochemistry.



RN 435333-52-1 HCAPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-1,4-dihydro-4-(3-hydroxy-4-methoxyphenyl)-6-phenyl-2-[(2,3,4,6-tetra-O-acetyl-beta-D-galactopyranosyl)thio]- (CA INDEX NAME)

Absolute stereochemistry.



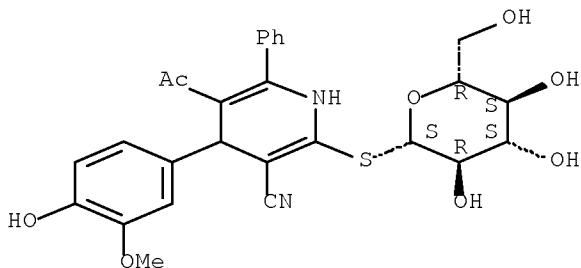
IT 435333-54-3P 435333-56-5P 435333-58-7P  
435333-60-1P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(synthesis of thiopyridines and their hydrogenated thioglycosides via piperidinium salts)

RN 435333-54-3 HCPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-2-( $\beta$ -D-glucopyranosylthio)-1,4-dihydro-4-(4-hydroxy-3-methoxyphenyl)-6-phenyl- (CA INDEX NAME)

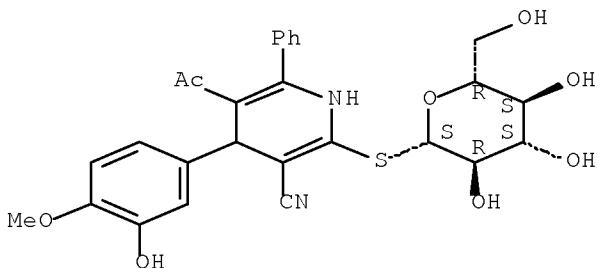
Absolute stereochemistry.



RN 435333-56-5 HCPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-2-( $\beta$ -D-glucopyranosylthio)-1,4-dihydro-4-(3-hydroxy-4-methoxyphenyl)-6-phenyl- (CA INDEX NAME)

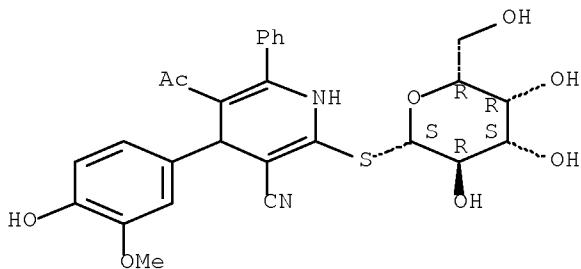
Absolute stereochemistry.



RN 435333-58-7 HCPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-2-( $\beta$ -D-galactopyranosylthio)-1,4-dihydro-4-(4-hydroxy-3-methoxyphenyl)-6-phenyl- (CA INDEX NAME)

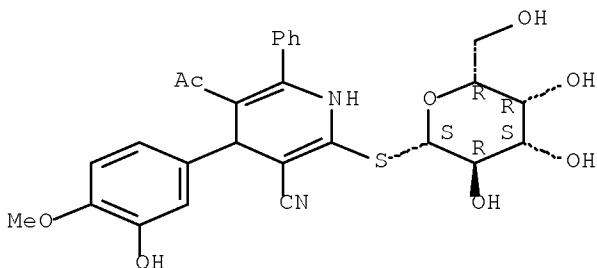
Absolute stereochemistry.



RN 435333-60-1 HCPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-2-( $\beta$ -D-galactopyranosylthio)-1,4-dihydro-4-(3-hydroxy-4-methoxyphenyl)-6-phenyl- (CA INDEX NAME)

Absolute stereochemistry.



IT 435333-62-3P 435333-64-5P 435333-66-7P  
435333-68-9P 435333-70-3P 435333-72-5P  
435333-74-7P 435333-76-9P

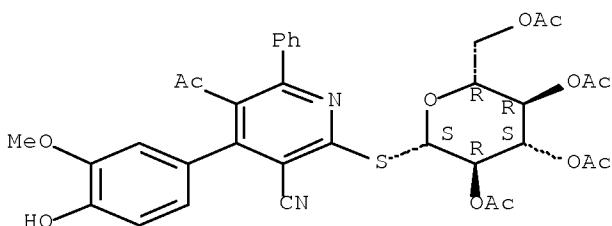
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)

(synthesis, antitumor activity, and antiviral activity against HIV-1 in MT-4 cells of thiopyridines and their hydrogenated thioglycosides via piperidinium salts)

RN 435333-62-3 HCAPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-4-(4-hydroxy-3-methoxyphenyl)-6-phenyl-2-[(2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl)thio]- (CA INDEX NAME)

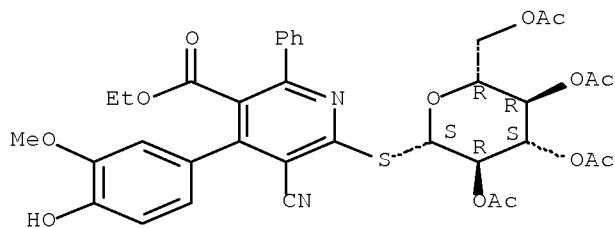
Absolute stereochemistry.



RN 435333-64-5 HCAPLUS

CN 3-Pyridinecarboxylic acid, 5-cyano-4-(4-hydroxy-3-methoxyphenyl)-2-phenyl-6-[(2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl)thio]-, ethyl ester (CA INDEX NAME)

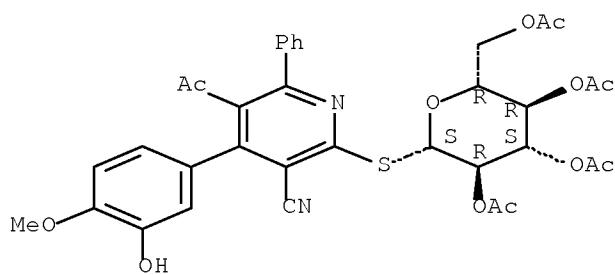
Absolute stereochemistry.



RN 435333-66-7 HCAPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-4-(3-hydroxy-4-methoxyphenyl)-6-phenyl-2-[(2,3,4,6-tetra-O-acetyl-beta-D-glucopyranosyl)thio]- (CA INDEX NAME)

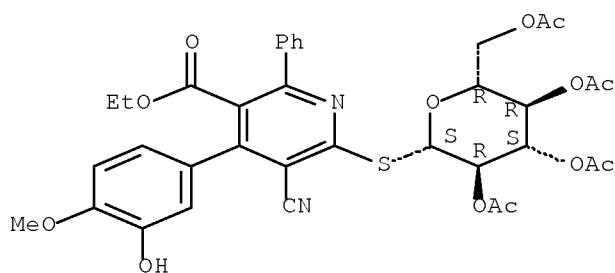
Absolute stereochemistry.



RN 435333-68-9 HCAPLUS

CN 3-Pyridinecarboxylic acid, 5-cyano-4-(3-hydroxy-4-methoxyphenyl)-2-phenyl-6-[(2,3,4,6-tetra-O-acetyl-beta-D-glucopyranosyl)thio]-, ethyl ester (CA INDEX NAME)

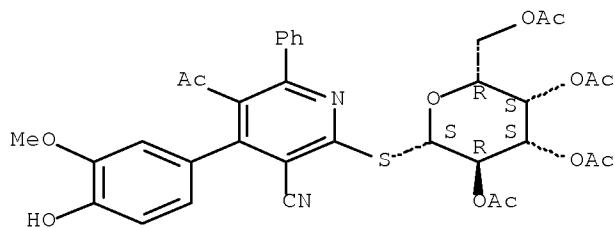
Absolute stereochemistry.



RN 435333-70-3 HCAPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-4-(4-hydroxy-3-methoxyphenyl)-6-phenyl-2-[(2,3,4,6-tetra-O-acetyl-beta-D-galactopyranosyl)thio]- (CA INDEX NAME)

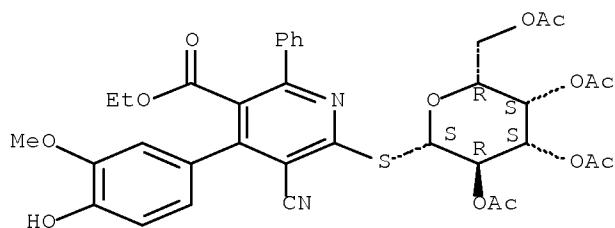
Absolute stereochemistry.



RN 435333-72-5 HCAPLUS

CN 3-Pyridinecarboxylic acid, 5-cyano-4-(4-hydroxy-3-methoxyphenyl)-2-phenyl-6-[(2,3,4,6-tetra-O-acetyl-beta-D-galactopyranosyl)thio]-, ethyl ester  
(CA INDEX NAME)

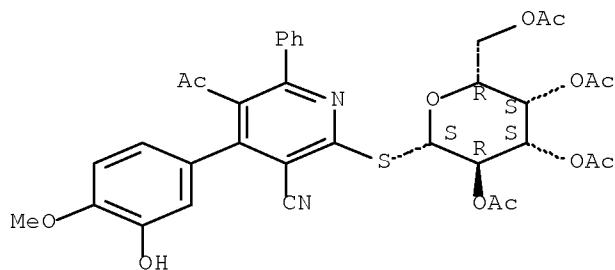
Absolute stereochemistry.



RN 435333-74-7 HCAPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-4-(3-hydroxy-4-methoxyphenyl)-6-phenyl-2-[(2,3,4,6-tetra-O-acetyl-beta-D-galactopyranosyl)thio]- (CA INDEX NAME)

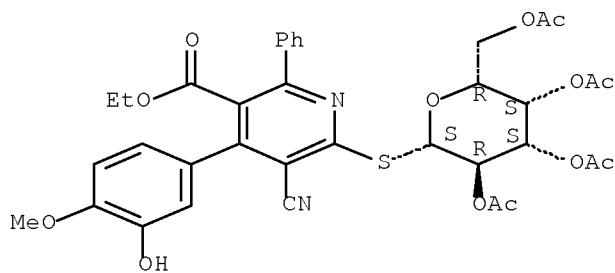
Absolute stereochemistry.



RN 435333-76-9 HCAPLUS

CN 3-Pyridinecarboxylic acid, 5-cyano-4-(3-hydroxy-4-methoxyphenyl)-2-phenyl-6-[(2,3,4,6-tetra-O-acetyl-beta-D-galactopyranosyl)thio]-, ethyl ester  
(CA INDEX NAME)

Absolute stereochemistry.



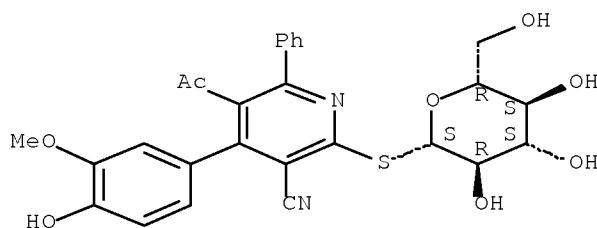
IT 435333-78-1P 435333-80-5P 435333-82-7P  
 435333-85-0P 435333-88-3P 435333-90-7P  
435333-92-9P 435333-94-1P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)  
 (synthesis, antitumor activity, and antiviral activity against HIV-1 in MT-4 cells of thiopyridines and their hydrogenated thioglycosides via piperidinium salts)

RN 435333-78-1 HCAPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-2-( $\beta$ -D-glucopyranosylthio)-4-(4-hydroxy-3-methoxyphenyl)-6-phenyl- (CA INDEX NAME)

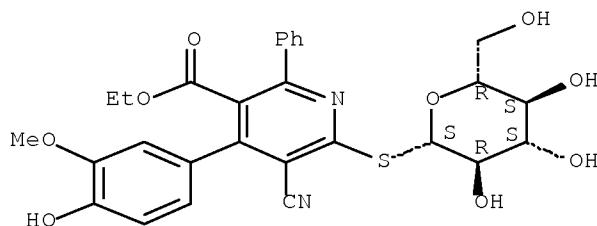
Absolute stereochemistry.



RN 435333-80-5 HCAPLUS

CN 3-Pyridinecarboxylic acid, 5-cyano-6-( $\beta$ -D-glucopyranosylthio)-4-(4-hydroxy-3-methoxyphenyl)-2-phenyl-, ethyl ester (CA INDEX NAME)

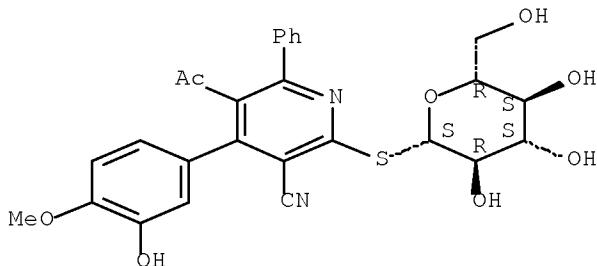
Absolute stereochemistry.



RN 435333-82-7 HCAPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-2-( $\beta$ -D-glucopyranosylthio)-4-(3-hydroxy-4-methoxyphenyl)-6-phenyl- (CA INDEX NAME)

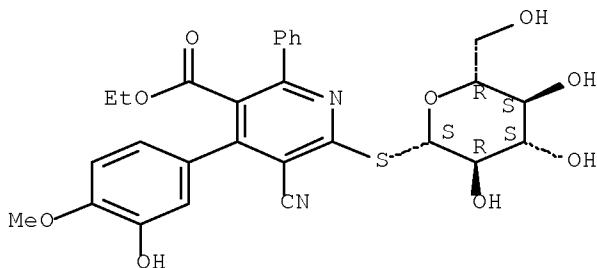
Absolute stereochemistry.



RN 435333-85-0 HCPLUS

CN 3-Pyridinecarboxylic acid, 5-cyano-6-( $\beta$ -D-glucopyranosylthio)-4-(3-hydroxy-4-methoxyphenyl)-2-phenyl-, ethyl ester (CA INDEX NAME)

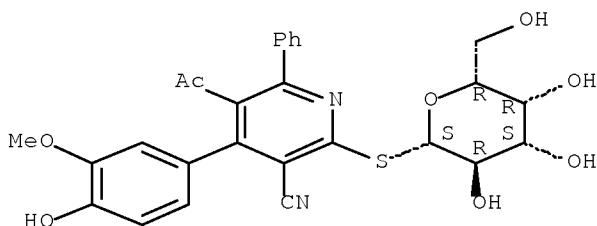
Absolute stereochemistry.



RN 435333-88-3 HCPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-2-( $\beta$ -D-galactopyranosylthio)-4-(4-hydroxy-3-methoxyphenyl)-6-phenyl- (CA INDEX NAME)

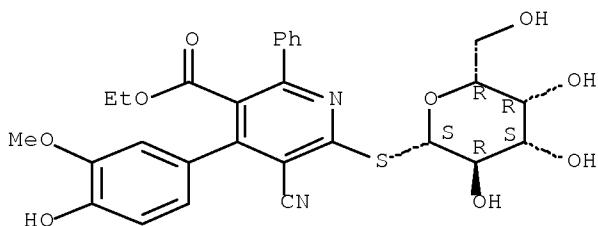
Absolute stereochemistry.



RN 435333-90-7 HCPLUS

CN 3-Pyridinecarboxylic acid, 5-cyano-6-( $\beta$ -D-galactopyranosylthio)-4-(4-hydroxy-3-methoxyphenyl)-2-phenyl-, ethyl ester (CA INDEX NAME)

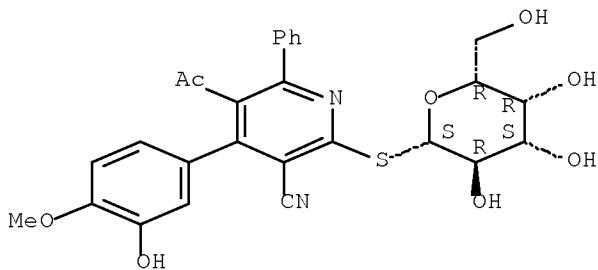
Absolute stereochemistry.



RN 435333-92-9 HCAPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-2-( $\beta$ -D-galactopyranosylthio)-4-(3-hydroxy-4-methoxyphenyl)-6-phenyl- (CA INDEX NAME)

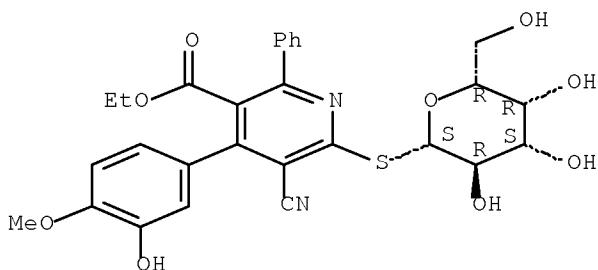
Absolute stereochemistry.



RN 435333-94-1 HCAPLUS

CN 3-Pyridinecarboxylic acid, 5-cyano-6-( $\beta$ -D-galactopyranosylthio)-4-(3-hydroxy-4-methoxyphenyl)-2-phenyl-, ethyl ester (CA INDEX NAME)

Absolute stereochemistry.



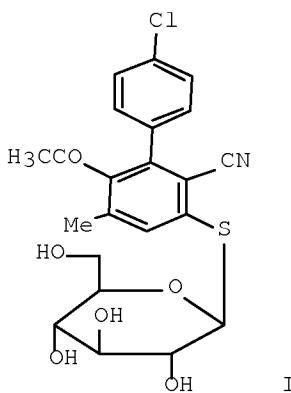
REFERENCE COUNT:

10

THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L57 ANSWER 15 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2002:753822 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 138:106896  
 TITLE: First glycoside synthesis via piperidinium salts of heterocyclic nitrogen bases: the synthesis of a new class of dihydropyridine thioglycosides  
 AUTHOR(S): Attia, Adel M.; Elgemeie, Galal H.  
 CORPORATE SOURCE: Department of Chemistry, Faculty of Science, Helwan University, Cairo, Egypt  
 SOURCE: Journal of Carbohydrate Chemistry (2002), 21(4), 325-339  
 CODEN: JCACDM; ISSN: 0732-8303  
 PUBLISHER: Marcel Dekker, Inc.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 138:106896  
 ED Entered STN: 04 Oct 2002  
 GI



AB A first reported method for preparation of a new class of thioglycosides, e.g. I, via reaction of piperidinium salts of dihydropyridinethiones with 2,3,4,6-tetra-O-acetyl- $\alpha$ -D-glucosyl and galactopyranosyl bromides has been studied. Comparison with the products obtained from silylated thiopyridines is made.

CC 33-3 (Carbohydrates)

IT	103868-17-3P	103868-29-7P	121104-38-9P	121104-40-3P	137451-62-8P
	137451-63-9P	488759-74-6P	488759-76-8P	488759-78-0P	488759-80-4P
	488759-82-6P	488759-83-7P	488759-84-8P	488759-85-9P	
	<u>488759-86-0P</u>	<u>488759-87-1P</u>	<u>488759-88-2P</u>		
	488759-89-3P	488759-90-6P	488759-91-7P	<u>488759-92-8P</u>	
	<u>488759-93-9P</u>	<u>488759-94-0P</u>	<u>488759-95-1P</u>	488759-96-2P	
	<u>488759-97-3P</u>	<u>488759-98-4P</u>	<u>488759-99-5P</u>		
	<u>488760-00-5P</u>	<u>488760-01-6P</u>	<u>488760-02-7P</u>	488760-03-8P	
	<u>488760-04-9P</u>	<u>488760-05-0P</u>	<u>488760-06-1P</u>		
	488760-31-2P				

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(synthesis of dihydropyridine thioglycosides via glycosylation of piperidinium salts of heterocyclic nitrogen bases)

IT	488760-07-2P	488760-08-3P	488760-09-4P	<u>488760-10-7P</u>
	<u>488760-11-8P</u>	<u>488760-12-9P</u>	<u>488760-13-0P</u>	488760-14-1P
	<u>488760-15-2P</u>	<u>488760-16-3P</u>	<u>488760-17-4P</u>	
	<u>488760-18-5P</u>	<u>488760-19-6P</u>	<u>488760-20-9P</u>	488760-21-0P

488760-22-1P 488760-23-2P 488760-24-3P  
488760-25-4P 488760-26-5P 488760-27-6P 488760-28-7P  
488760-29-8P 488760-30-1P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(synthesis of dihydropyridine thioglycosides via glycosylation of  
piperidinium salts of heterocyclic nitrogen bases)

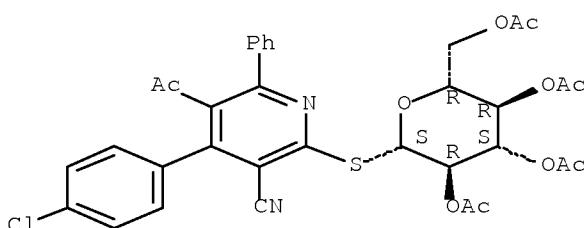
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488759-92-8P 488759-93-9P 488759-94-0P  
488759-98-4P 488759-99-5P 488760-00-5P  
488760-04-9P 488760-05-0P 488760-06-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(synthesis of dihydropyridine thioglycosides via glycosylation of  
piperidinium salts of heterocyclic nitrogen bases)

RN 488759-86-0 HCPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-4-(4-chlorophenyl)-6-phenyl-2-[(2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl)thio]- (CA INDEX NAME)

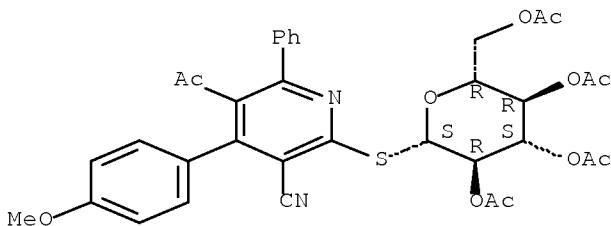
Absolute stereochemistry. Rotation (+).



RN 488759-87-1 HCPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-4-(4-methoxyphenyl)-6-phenyl-2-[(2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl)thio]- (CA INDEX NAME)

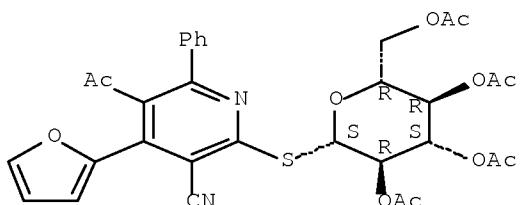
Absolute stereochemistry. Rotation (+).



RN 488759-88-2 HCPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-4-(2-furanyl)-6-phenyl-2-[(2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl)thio]- (CA INDEX NAME)

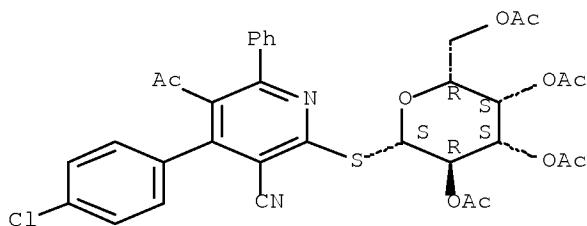
Absolute stereochemistry. Rotation (+).



RN 488759-92-8 HCPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-4-(4-chlorophenyl)-6-phenyl-2-[(2,3,4,6-tetra-O-acetyl-beta-D-galactopyranosyl)thio]- (CA INDEX NAME)

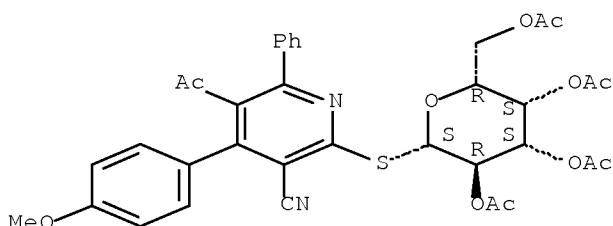
Absolute stereochemistry. Rotation (+).



RN 488759-93-9 HCPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-4-(4-methoxyphenyl)-6-phenyl-2-[(2,3,4,6-tetra-O-acetyl-beta-D-galactopyranosyl)thio]- (CA INDEX NAME)

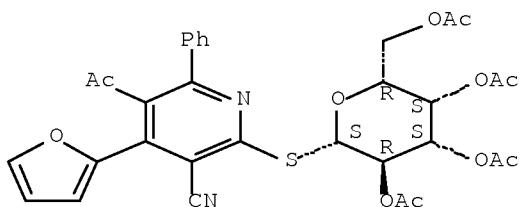
Absolute stereochemistry. Rotation (+).



RN 488759-94-0 HCPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-4-(2-furanyl)-6-phenyl-2-[(2,3,4,6-tetra-O-acetyl-beta-D-galactopyranosyl)thio]- (CA INDEX NAME)

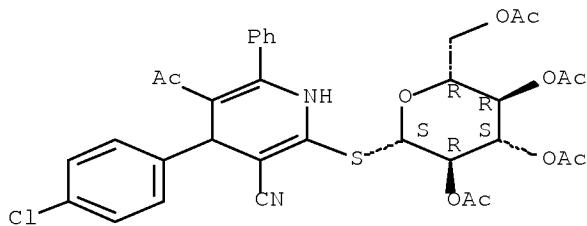
Absolute stereochemistry. Rotation (+).



RN 488759-98-4 HCPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-4-(4-chlorophenyl)-1,4-dihydro-6-phenyl-2-[(2,3,4,6-tetra-O-acetyl-beta-D-glucopyranosyl)thio]- (CA INDEX NAME)

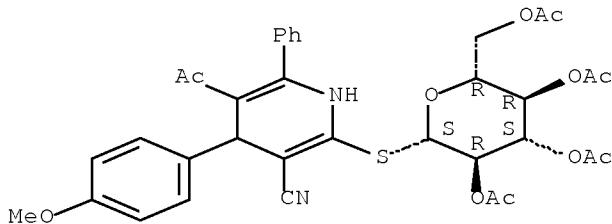
Absolute stereochemistry.



RN 488759-99-5 HCPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-1,4-dihydro-4-(4-methoxyphenyl)-6-phenyl-2-[(2,3,4,6-tetra-O-acetyl-beta-D-glucopyranosyl)thio]- (CA INDEX NAME)

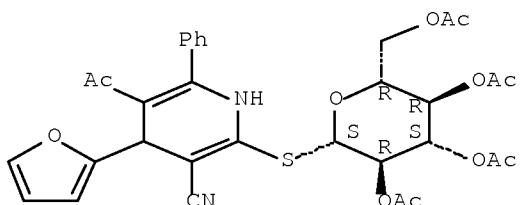
Absolute stereochemistry.



RN 488760-00-5 HCPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-4-(2-furanyl)-1,4-dihydro-6-phenyl-2-[(2,3,4,6-tetra-O-acetyl-beta-D-glucopyranosyl)thio]- (CA INDEX NAME)

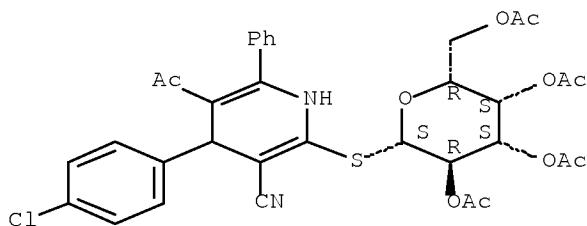
Absolute stereochemistry.



RN 488760-04-9 HCPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-4-(4-chlorophenyl)-1,4-dihydro-6-phenyl-2-[(2,3,4,6-tetra-O-acetyl-beta-D-galactopyranosyl)thio]- (CA INDEX NAME)

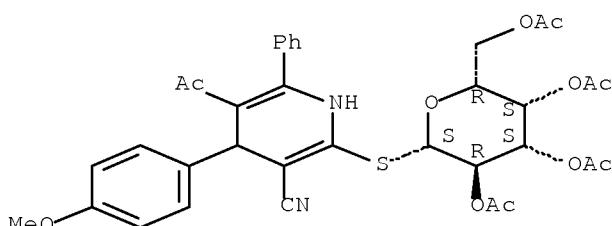
Absolute stereochemistry.



RN 488760-05-0 HCPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-1,4-dihydro-4-(4-methoxyphenyl)-6-phenyl-2-[(2,3,4,6-tetra-O-acetyl-beta-D-galactopyranosyl)thio]- (CA INDEX NAME)

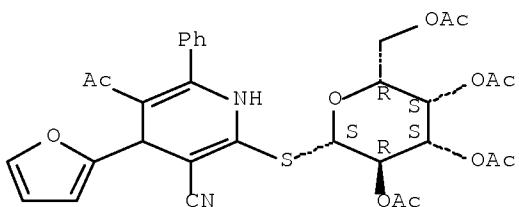
Absolute stereochemistry.



RN 488760-06-1 HCPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-4-(2-furanyl)-1,4-dihydro-6-phenyl-2-[(2,3,4,6-tetra-O-acetyl-beta-D-galactopyranosyl)thio]- (CA INDEX NAME)

Absolute stereochemistry.



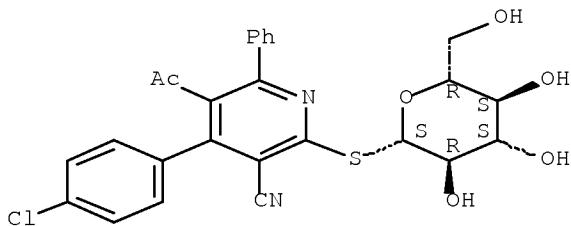
IT 488760-10-7P 488760-11-8P 488760-12-9P  
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 488760-28-7P 488760-29-8P 488760-30-1P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (synthesis of dihydropyridine thioglycosides via glycosylation of piperidinium salts of heterocyclic nitrogen bases)

RN 488760-10-7 HCAPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-4-(4-chlorophenyl)-2-( $\beta$ -D-glucopyranosylthio)-6-phenyl- (CA INDEX NAME)

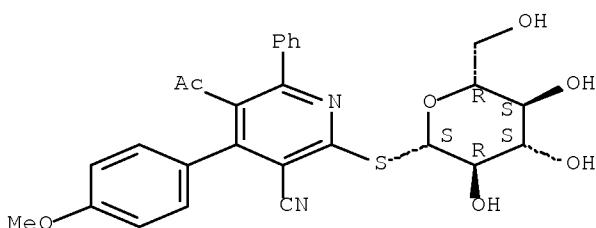
Absolute stereochemistry. Rotation (+).



RN 488760-11-8 HCAPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-2-( $\beta$ -D-glucopyranosylthio)-4-(4-methoxyphenyl)-6-phenyl- (CA INDEX NAME)

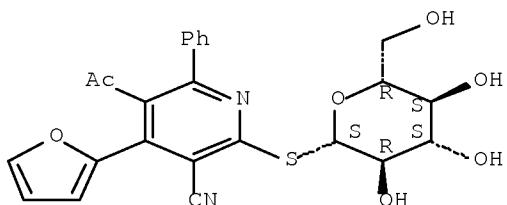
Absolute stereochemistry. Rotation (+).



RN 488760-12-9 HCAPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-4-(2-furanyl)-2-( $\beta$ -D-glucopyranosylthio)-6-phenyl- (CA INDEX NAME)

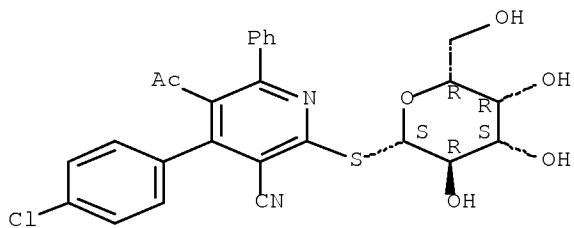
Absolute stereochemistry.



RN 488760-16-3 HCPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-4-(4-chlorophenyl)-2-( $\beta$ -D-galactopyranosylthio)-6-phenyl- (CA INDEX NAME)

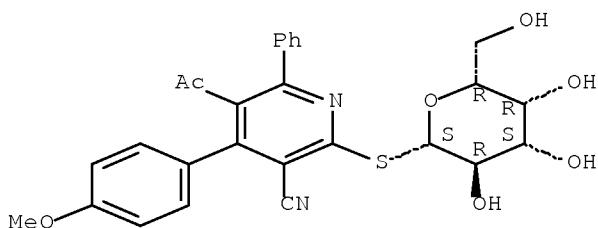
Absolute stereochemistry.



RN 488760-17-4 HCPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-2-( $\beta$ -D-galactopyranosylthio)-4-(4-methoxyphenyl)-6-phenyl- (CA INDEX NAME)

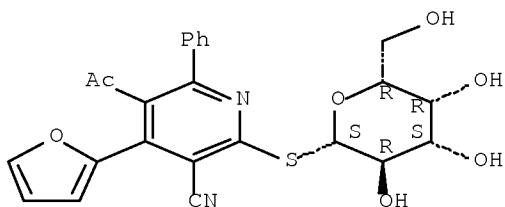
Absolute stereochemistry. Rotation (+).



RN 488760-18-5 HCPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-4-(2-furanyl)-2-( $\beta$ -D-galactopyranosylthio)-6-phenyl- (CA INDEX NAME)

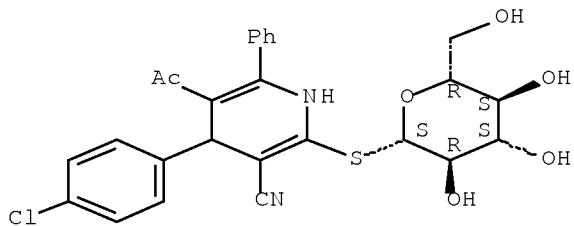
Absolute stereochemistry. Rotation (+).



RN 488760-22-1 HCPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-4-(4-chlorophenyl)-2-(β-D-glucopyranosylthio)-1,4-dihydro-6-phenyl- (CA INDEX NAME)

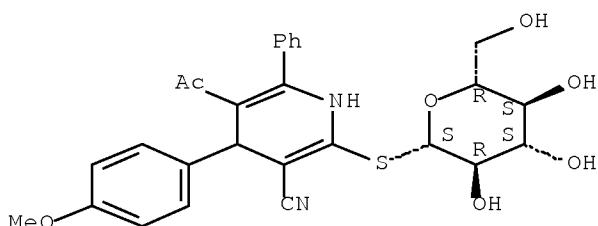
Absolute stereochemistry.



RN 488760-23-2 HCPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-2-(β-D-glucopyranosylthio)-1,4-dihydro-4-(4-methoxyphenyl)-6-phenyl- (CA INDEX NAME)

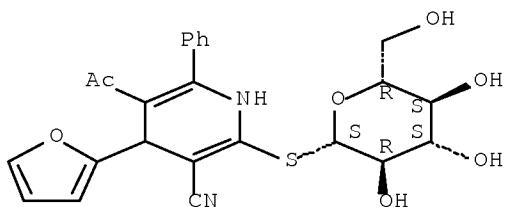
Absolute stereochemistry.



RN 488760-24-3 HCPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-4-(2-furanyl)-2-(β-D-glucopyranosylthio)-1,4-dihydro-6-phenyl- (CA INDEX NAME)

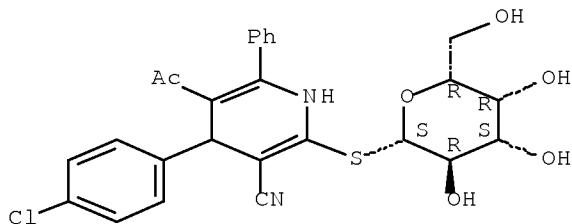
Absolute stereochemistry.



RN 488760-28-7 HCPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-4-(4-chlorophenyl)-2-( $\beta$ -D-galactopyranosylthio)-1,4-dihydro-6-phenyl- (CA INDEX NAME)

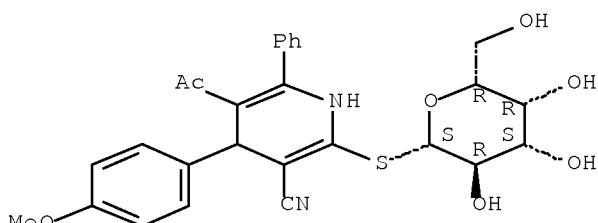
Absolute stereochemistry.



RN 488760-29-8 HCPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-2-( $\beta$ -D-galactopyranosylthio)-1,4-dihydro-4-(4-methoxyphenyl)-6-phenyl- (CA INDEX NAME)

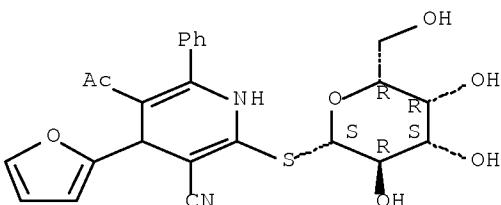
Absolute stereochemistry.



RN 488760-30-1 HCPLUS

CN 3-Pyridinecarbonitrile, 5-acetyl-4-(2-furanyl)-2-( $\beta$ -D-galactopyranosylthio)-1,4-dihydro-6-phenyl- (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L57 ANSWER 16 OF 51 HCPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2002:323218 HCPLUS [Full-text](#)

DOCUMENT NUMBER: 137:125331

TITLE: Synthesis and biological evaluation of S-glycosylated pyridines

AUTHOR(S): Attia, Adel M. E.

CORPORATE SOURCE: Department of Chemistry, Faculty of Education, University of Tanta (Kafr El-Sheikh Branch), Egypt

SOURCE: Nucleosides, Nucleotides & Nucleic Acids ([2002](#)), 21(3), 207-216

CODEN: NNNAFY; ISSN: 1525-7770

PUBLISHER: Marcel Dekker, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 137:125331

ED Entered STN: 01 May 2002

AB The formation of unnatural nucleosides, 2-( $\beta$ -D-glycopyranosylthio)pyridines, via the reaction of sodium salts of thiopyridines with glycosyl bromides has been studied. Comparison with the products obtained from silylated thiopyridines and peracetylated sugars is made. <sup>13</sup>C NMR was utilized to elucidate the proposed structures of the products. Cytotoxicity of the final products was tested against different types of tumor viruses and HIV-1; no significant activity was found (no data).

CC 33-3 (Carbohydrates)

Section cross-reference(s): 1, 27

IT 444102-91-4P 444102-92-SP 444102-93-6P

444102-94-7P 444102-95-8P 444102-96-9P

444102-97-0P 444102-98-1P 444102-99-2P

444103-00-3P

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)

(synthesis, anti-HIV and antitumor activity of S-glycosylated pyridines)

IT 444103-01-9P 444103-02-0P 444103-03-1P

444103-04-2P 444103-05-3P 444103-06-4P

444103-07-5P 444103-08-6P 444103-09-7P

444103-10-0P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(synthesis, anti-HIV and antitumor activity of S-glycosylated pyridines)

IT 444102-91-4P 444102-92-5P 444102-93-6P

444102-94-7P 444102-95-8P 444102-96-9P

444102-97-0P 444102-98-1P 444102-99-2P

444103-00-8P

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)

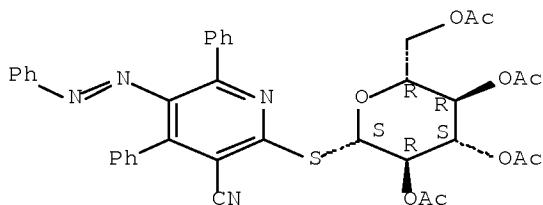
(synthesis, anti-HIV and antitumor activity of S-glycosylated pyridines)

RN 444102-91-4 HCPLUS

CN 3-Pyridinecarbonitrile, 4,6-diphenyl-5-(phenylazo)-2-[(2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl)thio]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

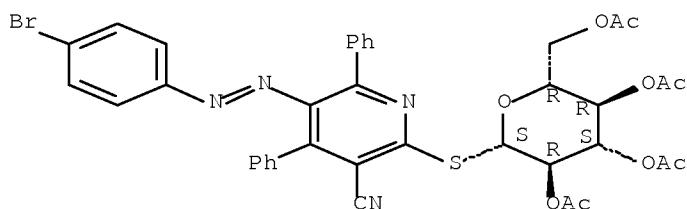


RN 444102-92-5 HCPLUS

CN 3-Pyridinecarbonitrile, 5-[(4-bromophenyl)azo]-4,6-diphenyl-2-[(2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl)thio]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

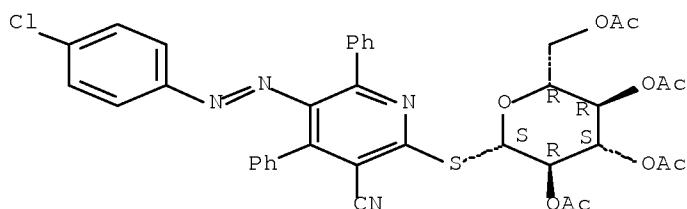


RN 444102-93-6 HCPLUS

CN 3-Pyridinecarbonitrile, 5-[(4-chlorophenyl)azo]-4,6-diphenyl-2-[(2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl)thio]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

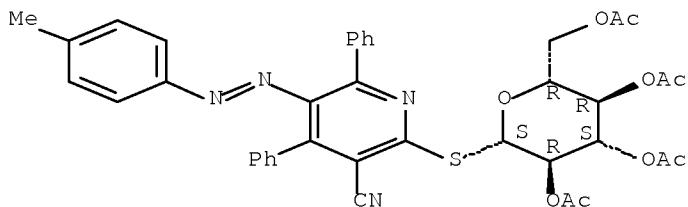


RN 444102-94-7 HCPLUS

CN 3-Pyridinecarbonitrile, 5-[ (4-methylphenyl)azo]-4,6-diphenyl-2-[ (2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl)thio]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

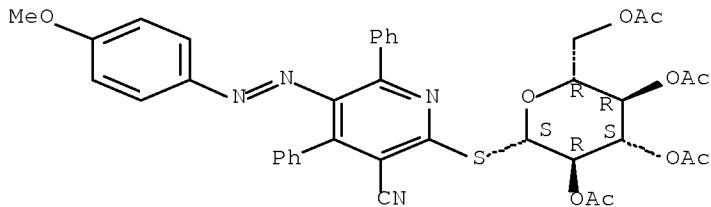


RN 444102-95-8 HCPLUS

CN 3-Pyridinecarbonitrile, 5-[ (4-methoxyphenyl)azo]-4,6-diphenyl-2-[ (2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl)thio]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

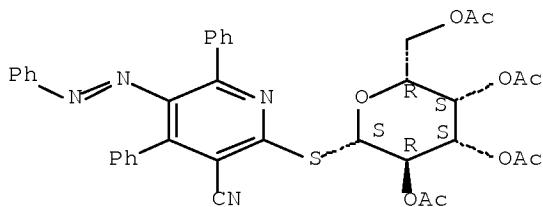


RN 444102-96-9 HCPLUS

CN 3-Pyridinecarbonitrile, 4,6-diphenyl-5-(phenylazo)-2-[ (2,3,4,6-tetra-O-acetyl- $\beta$ -D-galactopyranosyl)thio]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

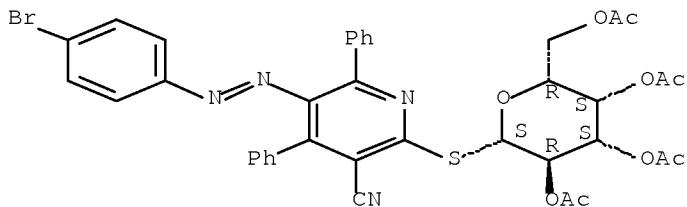


RN 444102-97-0 HCPLUS

CN 3-Pyridinecarbonitrile, 5-[ (4-bromophenyl)azo]-4,6-diphenyl-2-[ (2,3,4,6-

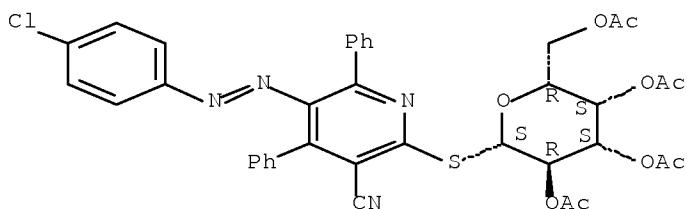
tetra-O-acetyl- $\beta$ -D-galactopyranosyl)thio]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
Double bond geometry unknown.



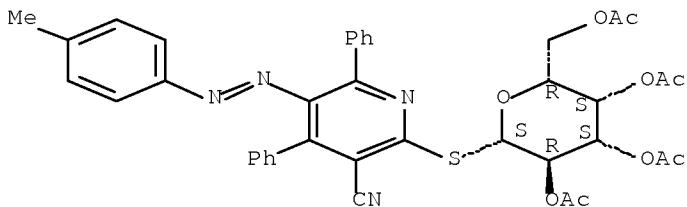
RN 444102-98-1 HCAPLUS  
 CN 3-Pyridinecarbonitrile, 5-[(4-chlorophenyl)azo]-4,6-diphenyl-2-[(2,3,4,6-tetra-O-acetyl- $\beta$ -D-galactopyranosyl)thio]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
Double bond geometry unknown.



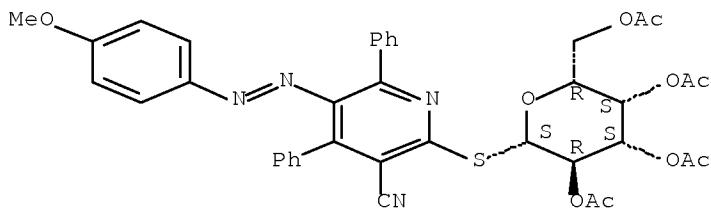
RN 444102-99-2 HCAPLUS  
 CN 3-Pyridinecarbonitrile, 5-[(4-methylphenyl)azo]-4,6-diphenyl-2-[(2,3,4,6-tetra-O-acetyl- $\beta$ -D-galactopyranosyl)thio]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
Double bond geometry unknown.



RN 444103-00-8 HCAPLUS  
 CN 3-Pyridinecarbonitrile, 5-[(4-methoxyphenyl)azo]-4,6-diphenyl-2-[(2,3,4,6-tetra-O-acetyl- $\beta$ -D-galactopyranosyl)thio]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
Double bond geometry unknown.



IT 444103-01-9P 444103-02-0P 444103-03-1P  
 444103-04-2P 444103-05-3P 444103-06-4P  
 444103-07-5P 444103-08-6P 444103-09-7P  
 444103-10-8P

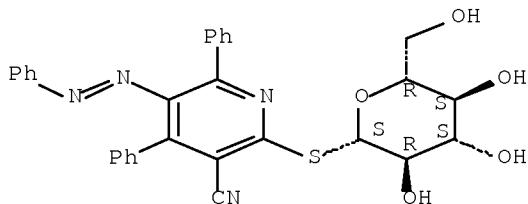
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)  
 (synthesis, anti-HIV and antitumor activity of S-glycosylated pyridines)

RN 444103-01-9 HCAPLUS

CN 3-Pyridinecarbonitrile, 2-( $\beta$ -D-glucopyranosylthio)-4,6-diphenyl-5-(phenylazo)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

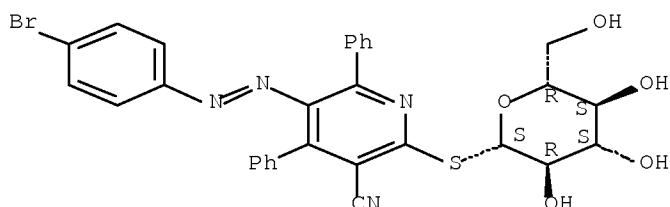


RN 444103-02-0 HCAPLUS

CN 3-Pyridinecarbonitrile, 5-[ (4-bromophenyl)azo]-2-( $\beta$ -D-glucopyranosylthio)-4,6-diphenyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

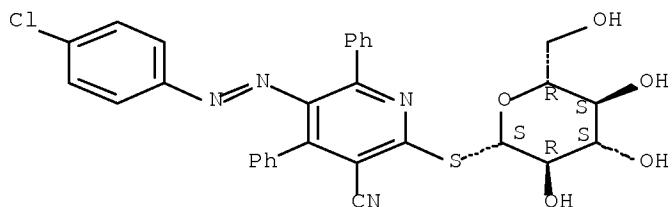


RN 444103-03-1 HCAPLUS

CN 3-Pyridinecarbonitrile, 5-[ (4-chlorophenyl)azo]-2-( $\beta$ -D-

glucopyranosylthio)-4,6-diphenyl- (9CI) (CA INDEX NAME)

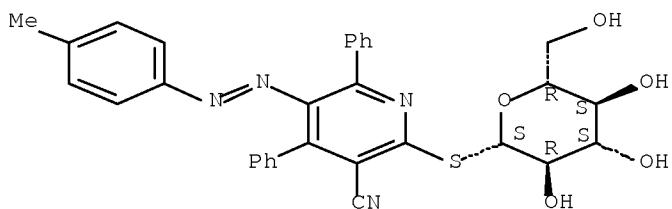
Absolute stereochemistry.  
Double bond geometry unknown.



RN 444103-04-2 HCPLUS

CN 3-Pyridinecarbonitrile, 2-( $\beta$ -D-glucopyranosylthio)-5-[(4-methylphenyl)azo]-4,6-diphenyl- (9CI) (CA INDEX NAME)

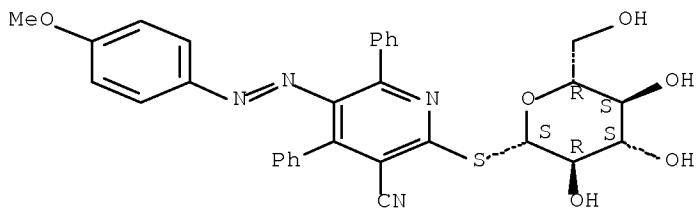
Absolute stereochemistry.  
Double bond geometry unknown.



RN 444103-05-3 HCPLUS

CN 3-Pyridinecarbonitrile, 2-( $\beta$ -D-glucopyranosylthio)-5-[(4-methoxyphenyl)azo]-4,6-diphenyl- (9CI) (CA INDEX NAME)

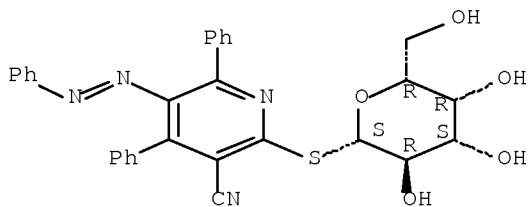
Absolute stereochemistry.  
Double bond geometry unknown.



RN 444103-06-4 HCPLUS

CN 3-Pyridinecarbonitrile, 2-( $\beta$ -D-galactopyranosylthio)-4,6-diphenyl-5-(phenylazo)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
Double bond geometry unknown.

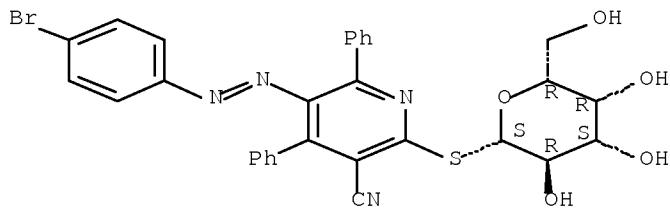


RN 444103-07-5 HCPLUS

CN 3-Pyridinecarbonitrile, 5-[ (4-bromophenyl)azo]-2-( $\beta$ -D-galactopyranosylthio)-4,6-diphenyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

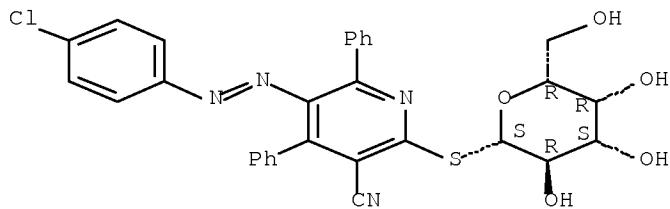


RN 444103-08-6 HCPLUS

CN 3-Pyridinecarbonitrile, 5-[ (4-chlorophenyl)azo]-2-( $\beta$ -D-galactopyranosylthio)-4,6-diphenyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

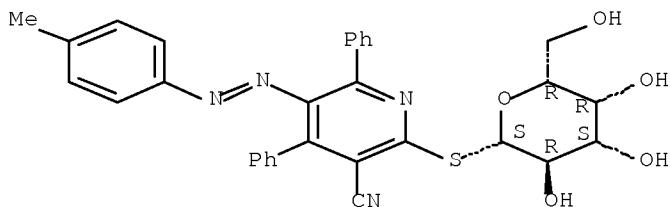


RN 444103-09-7 HCPLUS

CN 3-Pyridinecarbonitrile, 2-( $\beta$ -D-galactopyranosylthio)-5-[ (4-methylphenyl)azo]-4,6-diphenyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

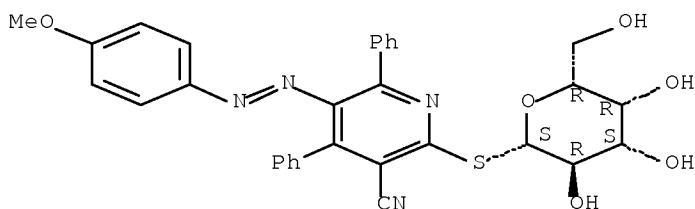


RN 444103-10-0 HCPLUS

CN 3-Pyridinecarbonitrile, 2-(β-D-galactopyranosylthio)-5-[ (4-methoxyphenyl)azo]-4,6-diphenyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.



REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L57 ANSWER 17 OF 51 HCPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2002:274972 HCPLUS [Full-text](#)

DOCUMENT NUMBER: 137:140466

TITLE: Convenient methods for synthesis of partially hydrogenated benzothiazol-2-ylpyridines

AUTHOR(S): Krivokolysko, S. G.; Dyachenko, V. D.; Litvinov, V. P.

CORPORATE SOURCE: Taras Shevchenko Lugansk State Pedagogical University, Luhansk, 348011, Ukraine

SOURCE: Chemistry of Heterocyclic Compounds (New York, NY, United States) (Translation of Khimiya Geterotsiklicheskikh Soedinenii) (2001), 37(9), 1114-1118

CODEN: CHCCAL; ISSN: 0009-3122

PUBLISHER: Kluwer Academic/Consultants Bureau

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 137:140466

ED Entered STN: 12 Apr 2002

AB By condensation of 2-chlorobenzaldehyde, cyanothioacetamide, and 2-phenacylbenzothiazole in the presence of piperidine, the authors have synthesized piperidinium 5-(benzothiazol-2-yl)-4-(2-chlorophenyl)-3-cyano-6-hydroxy-6-phenyl-1,4,5,6-tetrahydropyridine-2-thiolate, based on which the corresponding partially hydrogenated 2-alkylthiopyridines have been obtained.

CC 28-7 (Heterocyclic Compounds (More Than One Hetero Atom))

IT 444910-73-0P 444910-81-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of partially hydrogenated benzothiazolylpyridines)

IT 326183-63-5P 326916-27-2P 326916-28-3P  
326916-29-4P 326916-33-0P 326916-34-1P  
328108-89-0P 444910-78-5P

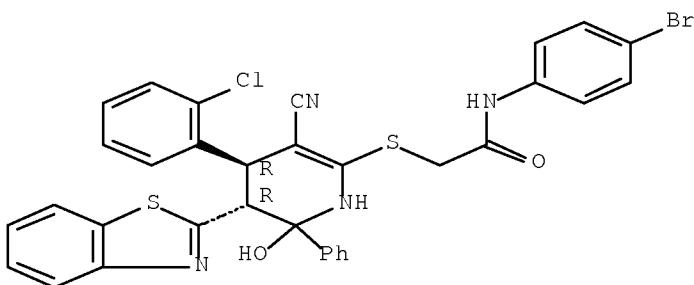
RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of partially hydrogenated benzothiazolylpyridines)

IT 444910-81-0P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of partially hydrogenated benzothiazolylpyridines)

RN 444910-81-0 HCAPLUS

CN Acetamide, 2-[(4R,5R)-5-(2-benzothiazolyl)-4-(2-chlorophenyl)-3-cyano-1,4,5,6-tetrahydro-6-hydroxy-6-phenyl-2-pyridinyl]thio]-N-(4-bromophenyl)-, rel- (CA INDEX NAME)

Relative stereochemistry.

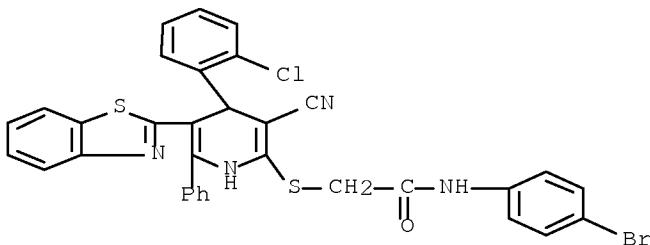


IT 326183-63-5P 326916-27-2P 326916-28-3P  
326916-29-4P 326916-33-0P 326916-34-1P  
328108-89-0P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of partially hydrogenated benzothiazolylpyridines)

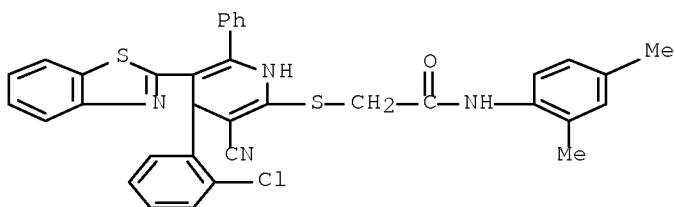
RN 326183-63-5 HCAPLUS

CN Acetamide, 2-[(5-(2-benzothiazolyl)-4-(2-chlorophenyl)-3-cyano-1,4-dihydro-6-phenyl-2-pyridinyl]thio]-N-(4-bromophenyl)- (CA INDEX NAME)



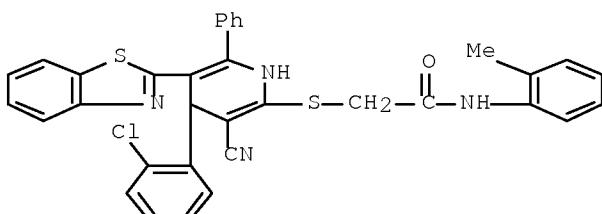
RN 326916-27-2 HCAPLUS

CN Acetamide, 2-[(5-(2-benzothiazolyl)-4-(2-chlorophenyl)-3-cyano-1,4-dihydro-6-phenyl-2-pyridinyl]thio]-N-(2,4-dimethylphenyl)- (CA INDEX NAME)



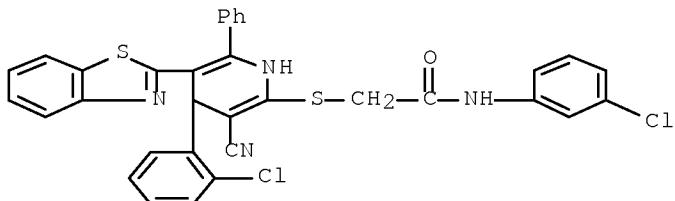
RN 326916-28-3 HCAPLUS

CN Acetamide, 2-[5-(2-benzothiazolyl)-4-(2-chlorophenyl)-3-cyano-1,4-dihydro-6-phenyl-2-pyridinyl]thio]-N-(2-methylphenyl)- (CA INDEX NAME)



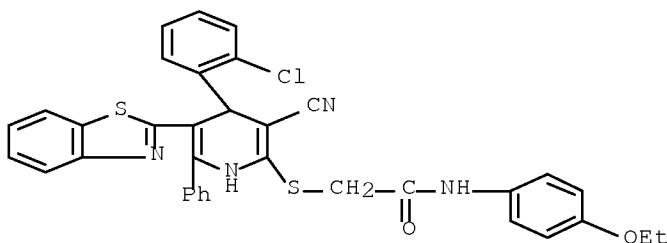
RN 326916-29-4 HCAPLUS

CN Acetamide, 2-[5-(2-benzothiazolyl)-4-(2-chlorophenyl)-3-cyano-1,4-dihydro-6-phenyl-2-pyridinyl]thio]-N-(3-chlorophenyl)- (CA INDEX NAME)

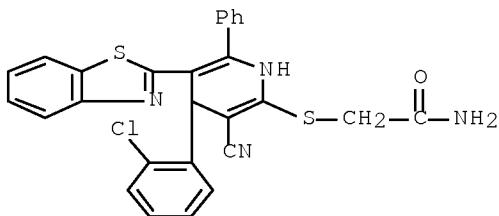


RN 326916-33-0 HCAPLUS

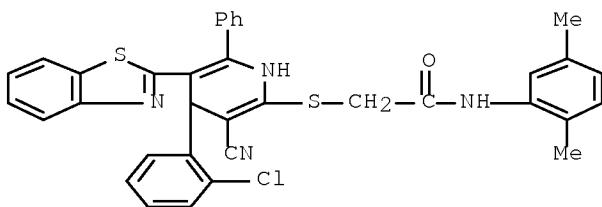
CN Acetamide, 2-[5-(2-benzothiazolyl)-4-(2-chlorophenyl)-3-cyano-1,4-dihydro-6-phenyl-2-pyridinyl]thio]-N-(4-ethoxyphenyl)- (CA INDEX NAME)



RN 326916-34-1 HCAPLUS  
 CN Acetamide, 2-[5-(2-benzothiazolyl)-4-(2-chlorophenyl)-3-cyano-1,4-dihydro-6-phenyl-2-pyridinyl]thio]- (CA INDEX NAME)



RN 328108-89-0 HCAPLUS  
 CN Acetamide, 2-[5-(2-benzothiazolyl)-4-(2-chlorophenyl)-3-cyano-1,4-dihydro-6-phenyl-2-pyridinyl]thio]-N-(2,5-dimethylphenyl)- (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L57 ANSWER 18 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2002:29436 HCAPLUS Full-text  
 DOCUMENT NUMBER: 136:340606  
 TITLE: Convenient one-pot synthesis of 2-carbamoylmethylthio-3-cyano-4,6-diaryl-5-ethoxycarbonyl-1,4-dihydropyridines  
 AUTHOR(S): Krauze, A.; Sile, L.; Duburs, G.  
 CORPORATE SOURCE: Latvian Institute of Organic Synthesis, Riga, LV-1006, Latvia  
 SOURCE: Heterocyclic Communications (2001), 7(4), 375-380  
 CODEN: HCOMEX; ISSN: 0793-0283  
 PUBLISHER: Freund Publishing House Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 136:340606  
 ED Entered STN: 11 Jan 2002  
 AB 6-[(2-Amino-2-oxoethyl)thio]-5-cyano-1,4-dihydro-2-(4-nitrophenyl)-4-phenyl-3-pyridinecarboxylic acid Et ester derivs. were obtained by a one-pot condensation of Et 4-nitrobenzoylacetate, an aromatic aldehyde and cyanothioacetamide in the presence of piperidine with subsequent alkylation and dehydroxylation. Thorpe's cyclization of 6-[(2-amino-2-oxoethyl)thio]-5-

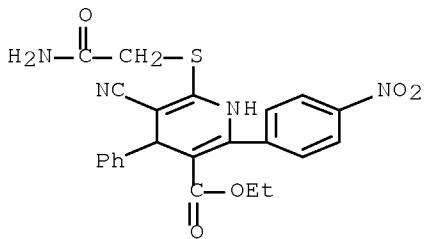
cyano-1,4-dihydro-2-(4-nitrophenyl)-4- phenyl-3-pyridinecarboxylic acid Et ester derivs. gave 3-amino-2-(aminocarbonyl)-4-phenyl-6-(4-nitrophenyl)thieno[2,3-b]pyridine- 5-carboxylic acid derivs.

CC 28-2 (Heterocyclic Compounds (More Than One Hetero Atom))  
 Section cross-reference(s): 27

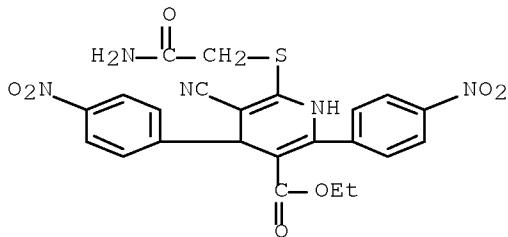
IT 417709-57-0P 417709-58-1P 417709-59-2P  
417709-60-5P 628685-15-4P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of 3-amino-2-(aminocarbonyl)-6-(4-nitrophenyl)thieno[2,3-b]pyridine-5-carboxylates by cyclization of 6-[(2-amino-2-oxoethyl)thio]-5-cyano-1,4-dihydro-2-(4-nitrophenyl)-3-pyridinecarboxylates)

IT 417709-57-0P 417709-58-1P 417709-59-2P  
417709-60-5P 628685-15-4P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of 3-amino-2-(aminocarbonyl)-6-(4-nitrophenyl)thieno[2,3-b]pyridine-5-carboxylates by cyclization of 6-[(2-amino-2-oxoethyl)thio]-5-cyano-1,4-dihydro-2-(4-nitrophenyl)-3-pyridinecarboxylates)

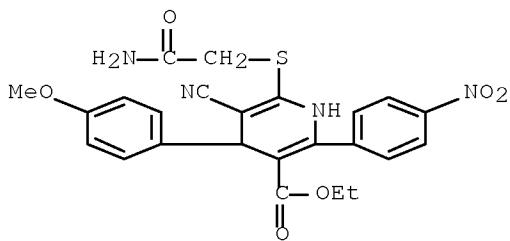
RN 417709-57-0 HCPLUS  
 CN 3-Pyridinecarboxylic acid, 6-[(2-amino-2-oxoethyl)thio]-5-cyano-1,4-dihydro-2-(4-nitrophenyl)-4-phenyl-, ethyl ester (CA INDEX NAME)



RN 417709-58-1 HCPLUS  
 CN 3-Pyridinecarboxylic acid, 6-[(2-amino-2-oxoethyl)thio]-5-cyano-1,4-dihydro-2,4-bis(4-nitrophenyl)-, ethyl ester (CA INDEX NAME)

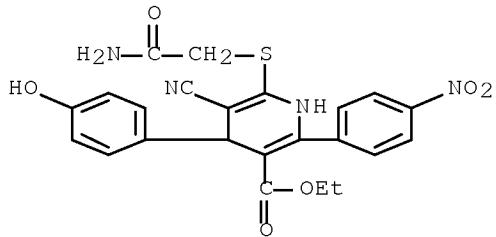


RN 417709-59-2 HCPLUS  
 CN 3-Pyridinecarboxylic acid, 6-[(2-amino-2-oxoethyl)thio]-5-cyano-1,4-dihydro-4-(4-methoxyphenyl)-2-(4-nitrophenyl)-, ethyl ester (CA INDEX NAME)



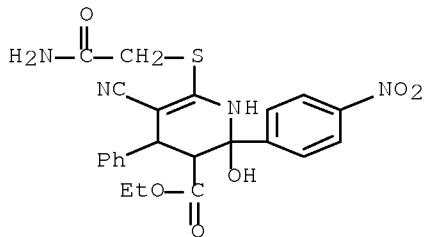
RN 417709-60-5 HCPLUS

CN 3-Pyridinecarboxylic acid, 6-[(2-amino-2-oxoethyl)thio]-5-cyano-1,4-dihydro-4-(4-hydroxyphenyl)-2-(4-nitrophenyl)-, ethyl ester (CA INDEX NAME)



RN 628685-15-4 HCPLUS

CN 3-Pyridinecarboxylic acid, 6-[(2-amino-2-oxoethyl)thio]-5-cyano-1,2,3,4-tetrahydro-2-hydroxy-2-(4-nitrophenyl)-4-phenyl-, ethyl ester (CA INDEX NAME)



REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L57 ANSWER 19 OF 51 HCPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2001:869720 HCPLUS [Full-text](#)

DOCUMENT NUMBER: 137:169436

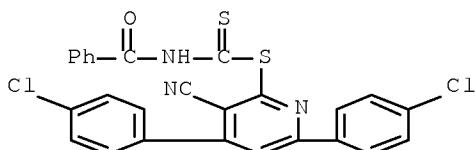
TITLE: Studies on 3-Cyano-4,6-di(p-chlorophenyl)-2(1H)pyridinethione

AUTHOR(S): Ahmed, Gamal A.; El-Salam, Naser A.  
 CORPORATE SOURCE: Faculty of Science, Chemistry Department, Zagazig University, Zagazig, Egypt  
 SOURCE: Journal of Saudi Chemical Society (2001), 5 (2), 183-187  
 CODEN: JSCSFO; ISSN: 1319-6103  
 PUBLISHER: Saudi Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 137:169436  
 ED    Entered STN: 02 Dec 2001  
 GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

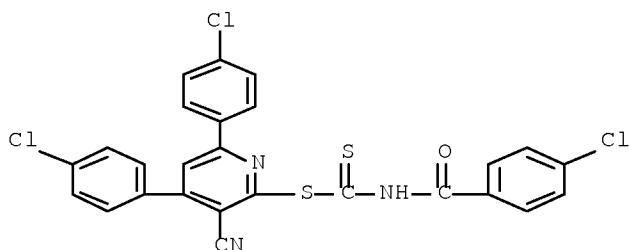
AB    Oxidation of pyridinethione derivative I ( $\text{Ar} = 4\text{-ClC}_6\text{H}_4$ ) with  $\text{Cl}_2/\text{CH}_3\text{COOH}$  gave sulfonyl chloride derivs. II ( $\text{R} = \text{SO}_2\text{Cl}$ ) which on aminolysis gave 3-amino-4,6-di(p-chlorophenyl)isothiazolo[5,4-b]pyridine-1,1-dioxide (III), and 3-cyano-4,6-di(p-chlorophenyl)pyridine-2-sulfonamide [II; ( $\text{R} = \text{SO}_2\text{NH}_2$ )]. Reaction of I with hydrazine hydrate, aroylisothiocyanate, arylhydrazines and chloroacetone gave pyrazolopyridine derivative IV, pyridinedithio-carbamate derivs. II ( $\text{R} = \text{SC:SNHCOR1}$ ;  $\text{R1} = \text{Ph}$ ,  $4\text{-ClC}_6\text{H}_4$ ), triazolopyridine derivs. V and thienopyridine derivative VI [ $\text{R2} = \text{Me}$ ; (VII)] resp. Condensation of VII with aromatic aldehydes afforded the tricyclic compds. VIII ( $\text{R1} = \text{Ph}$ ,  $2\text{-ClC}_6\text{H}_4$ ). Hydrolysis of I gave 3-mercaptop-4,6-di(p-chlorophenyl)-3-pyridine carboxamide which can be oxidized into 3-oxo-4,6-di(p-chlorophenyl)-2,3-dihydroisothiazolo[5,4-b]pyridine. Reaction of I with Et bromoacetate yields VI ( $\text{R2} = \text{OEt}$ ), which gave the potassium carboxylate on hydrolysis which cyclized to IX.

CC    28-2 (Heterocyclic Compounds (More Than One Hetero Atom))  
 IT    132602-49-4P    446311-91-7P    446311-92-8P    446311-93-9P    446311-95-1P  
       446311-96-2P    446311-97-3P    446311-99-5P    446312-00-1P  
446312-01-2P    446312-02-3P    446312-03-4P  
       RL: SPN (Synthetic preparation); PREP (Preparation)  
             (preparation of cyano-di(p-chlorophenyl)pyridinethione and anal. of oxidation  
             and cyclocondensation products)  
 IT    446312-01-2P    446312-02-3P  
       RL: SPN (Synthetic preparation); PREP (Preparation)  
             (preparation of cyano-di(p-chlorophenyl)pyridinethione and anal. of oxidation  
             and cyclocondensation products)  
 RN    446312-01-2    HCPLUS  
 CN    Carbamodithioic acid, benzoyl-, 4,6-bis(4-chlorophenyl)-3-cyano-2-pyridinyl ester (9CI)    (CA INDEX NAME)



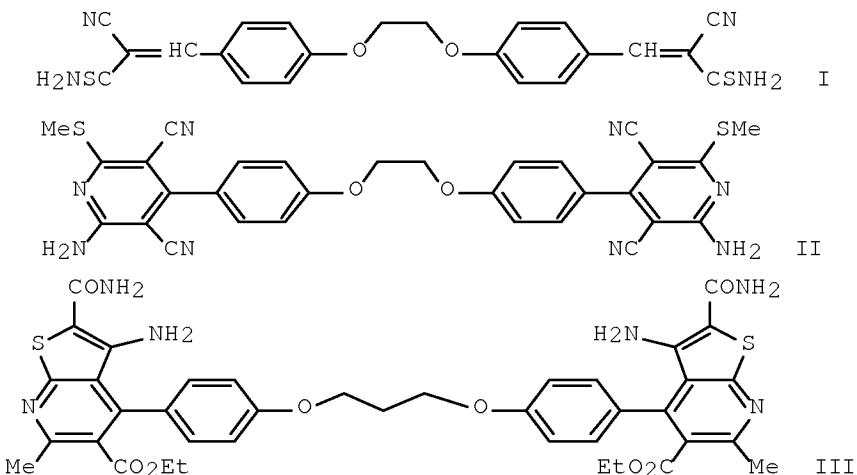
RN    446312-02-3    HCPLUS

CN Carbamodithioic acid, (4-chlorobenzoyl)-, 4,6-bis(4-chlorophenyl)-3-cyano-2-pyridinyl ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L57 ANSWER 20 OF 51 HCPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2001:643807 HCPLUS Full-text  
 DOCUMENT NUMBER: 135:357861  
 TITLE: Versatile starting materials for novel 1, $\omega$ -bis(pyridin-4-ylphenoxy)alkanes, and their corresponding bis(thieno[2,3-b]pyridin-4-ylphenoxy) derivatives  
 AUTHOR(S): Abbas, Ashraf A.; Elneairy, Mohamed A. A.; Mabkhot, Yehia N.  
 CORPORATE SOURCE: Chemistry Department, Faculty of Sciences, Cairo University, Giza, Egypt  
 SOURCE: Journal of Chemical Research, Synopses (2001), (4), 124-126, 0411-0427  
 CODEN: JRPSDC; ISSN: 0308-2342  
 PUBLISHER: Science Reviews Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 135:357861  
 ED Entered STN: 04 Sep 2001  
 GI



AB A synthesis is described, starting from p-hydroxybenzaldehyde, of some new bis(activated styrene) derivs., e.g. I, and their conversion into novel bis(pyridin-4-yl) ethers, e.g. II, and bis(thieno[2,3-b]pyridine) derivs., e.g. III.

CC 28-2 (Heterocyclic Compounds (More Than One Hetero Atom))

IT 221178-83-2P 221178-96-7P 221179-00-6P 333959-07-2P 372187-08-1P

372187-09-2P 372187-10-5P 372187-11-6P 372187-12-7P 372187-13-8P

372187-16-1P    372187-17-2P    372187-18-3P    372187-21-8P    372187-23-0P

372187-26-3P    372187-28-5P    372187-47-8P    372187-49-0P

~~372187-51-4P~~ ~~372187-52-5P~~ 372187-56-9P 372187-58-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)

(Reactant or reagent)

(preparation of bis(pyridinylphenoxy)- and

hienopyridinylphenoxy)alkane

S )

IT 372187-51-4P 372187-52-5P

8

RE: RCI (Reactant); SFN (Reactant or reagent)

(reactant or reagent) preparation of bis(puridinylphenoxy)- and

(preparation of bis(pyridinylphenoxo)- and bis(4-pyridinylphenoxo)alkanes

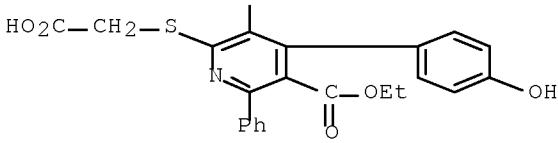
популярны в фенохимии, а также в химии полимеров.

BN 372187 51 4 UCARIUS

18

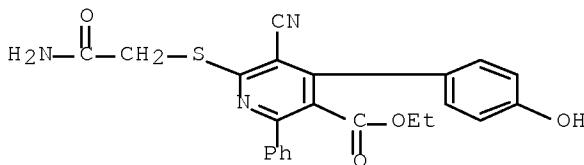
CN 3-Pyridinecarboxylic acid

hydroxyphenyl)-2-phenyl-, 3-ethyl ester (CA INDEX NAME)



RN 372187-52-5 HCAPLUS

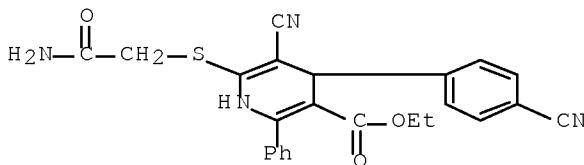
CN 3-Pyridinecarboxylic acid, 6-[ (2-amino-2-oxoethyl)thio]-5-cyano-4-(4-hydroxyphenyl)-2-phenyl-, ethyl ester (CA INDEX NAME)



REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L57 ANSWER 21 OF 51 HCPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2000:841385 HCPLUS [Full-text](#)  
 DOCUMENT NUMBER: 134:131406  
 TITLE: Synthesis and properties of 3-cyano-4-(4-cyanophenyl)-1,4-dihydropyridine-2(3H)-thiones  
 AUTHOR(S): Krauze, A.; Duburs, G.  
 CORPORATE SOURCE: Latvian Institute of Organic Synthesis, Riga, LV-1006, Latvia  
 SOURCE: Chemistry of Heterocyclic Compounds (New York) (Translation of Khimiya Geterotsiklicheskikh Soedinenii) (2000), 36(6), 693-697  
 CODEN: CHCCAL; ISSN: 0009-3122  
 PUBLISHER: Consultants Bureau  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 134:131406  
 ED Entered STN: 01 Dec 2000  
 AB Piperidinium 3-cyano-4-(4-cyanophenyl)-1,4-dihydropyridine-2(3H)-thiolates were obtained by the condensation of 1,3-dicarbonyl compds., 4-cyanobenzaldehyde, and cyanothioacetamide in the presence of an equimolar amount of piperidine. The acidification of these thiolates gave the corresponding 1,4-dihydropyridine-2(3H)-thiones and pyridine-2(1H)-thione. Alkylation of 1,4-dihydropyridine-2-thiolates or the reaction mixture of the three-carbon condensation using iodoacetamide gave 2-carbamoylmethylthio-1,4,5,6-tetrahydro- or 1,4-dihydropyridines, which were characterized by their conversion to 4,7-dihydrothieno[2,3- b]pyridines.  
 CC 27-16 (Heterocyclic Compounds (One Hetero Atom))  
 Section cross-reference(s): 28  
 IT 322406-92-8P 322406-95-1P 322406-96-2P 322406-97-3P  
322407-00-1P 322407-01-2P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 IT 322406-90-6P 322406-94-0P 322406-98-4P 322406-99-5P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation, reactions and properties of  
 cyano(cyanophenyl)dihydropyridinet  
 hione derivs.)  
 IT 322407-00-1P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 322407-00-1 HCPLUS

CN 3-Pyridinecarboxylic acid, 6-[(2-amino-2-oxoethyl)thio]-5-cyano-4-(4-cyanophenyl)-1,4-dihydro-2-phenyl-, ethyl ester (CA INDEX NAME)



IT 322406-98-4P

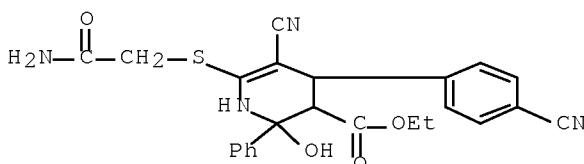
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(Reactant or reagent)

(preparation, reactions and properties of  
cyano(cyanophenyl)dihydropyridinet  
hione derivs.)

RN 322406-98-4 HCPLUS

CN 3-Pyridinecarboxylic acid, 6-[(2-amino-2-oxoethyl)thio]-5-cyano-4-(4-cyanophenyl)-1,2,3,4-tetrahydro-2-hydroxy-2-phenyl-, ethyl ester (CA INDEX NAME)



REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L57 ANSWER 22 OF 51 HCPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:412595 HCPLUS Full-text

DOCUMENT NUMBER: 133:207831

TITLE: Synthesis of substituted 4-hydroxy-1H-thieno[2,3-b;4,5-b']dipyridin-2-ones

AUTHOR(S): Rodinovskaya, L. A.; Shestopalov, A. M.

CORPORATE SOURCE: N. D. Zelinsky Institute of Organic Chemistry, Russian Academy of Sciences, Moscow, 117913, Russia

SOURCE: Russian Chemical Bulletin (Translation of Izvestiya Akademii Nauk, Seriya Khimicheskaya) (2000), 49(2), 348-354

CODEN: RCBUEY; ISSN: 1066-5285

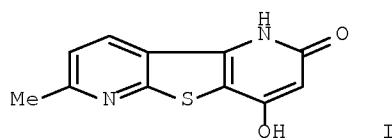
PUBLISHER: Consultants Bureau

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 21 Jun 2000

GI



AB Substituted 4-hydroxy-1H-thieno[2,3-b;4,5-b']dipyridin-2-ones, e.g., I, were prepared by reaction of 3-cyanopyridine-2(1H)-thiones with alkyl 4-chloroacetocetates and by intramol. cyclization of alkyl 4-(2-pyridylthio)acetoacetates or alkyl 3-(3-aminothieno[2,3-b]pyridin-2-yl)-3-oxopropionates under the action of bases.

CC 28-2 (Heterocyclic Compounds (More Than One Hetero Atom))

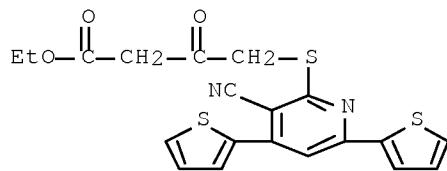
IT 290299-56-8P 290299-57-9P 290299-58-0P 290299-59-1P 290299-60-4P  
 290299-61-5P 290299-62-6P 290299-63-7P 290299-64-8P 290299-65-9P  
290299-66-0P 290299-67-1P 290299-68-2P 290299-69-3P  
290299-70-6P 290299-71-7P 290299-72-8P  
290299-73-9P 290299-74-0P 290299-75-1P 290299-76-2P  
290299-77-3P 290299-78-4P 290299-79-5P 290299-80-8P  
290299-81-9P 290300-12-8P 290300-14-0P 290300-16-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of 4-hydroxy-1H-thieno[2,3-b;4,5-b']dipyridin-2-ones)

IT 290299-69-3P 290299-70-6P 290299-71-7P  
290299-72-8P 290299-75-1P 290299-76-2P  
290299-77-3P 290299-78-4P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of 4-hydroxy-1H-thieno[2,3-b;4,5-b']dipyridin-2-ones)

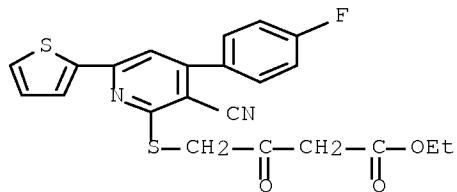
RN 290299-69-3 HCPLUS

CN Butanoic acid, 4-[(3-cyano-4,6-di-2-thienyl-2-pyridinyl)thio]-3-oxo-, ethyl ester (CA INDEX NAME)

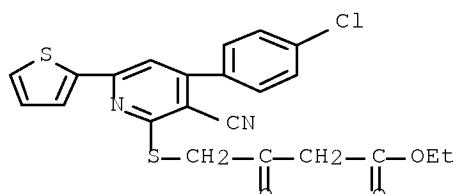


RN 290299-70-6 HCPLUS

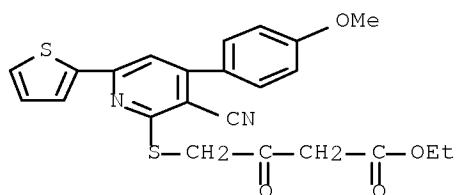
CN Butanoic acid, 4-[(3-cyano-4-(4-fluorophenyl)-6-(2-thienyl)-2-pyridinyl)thio]-3-oxo-, ethyl ester (CA INDEX NAME)



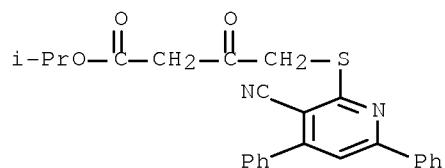
RN 290299-71-7 HCAPLUS  
 CN Butanoic acid, 4-[(4-(4-chlorophenyl)-3-cyano-6-(2-thienyl)-2-pyridinyl]thio]-3-oxo-, ethyl ester (CA INDEX NAME)



RN 290299-72-8 HCAPLUS  
 CN Butanoic acid, 4-[(3-cyano-4-(4-methoxyphenyl)-6-(2-thienyl)-2-pyridinyl]thio]-3-oxo-, ethyl ester (CA INDEX NAME)

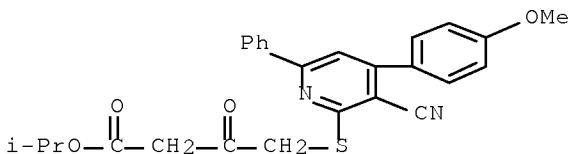


RN 290299-75-1 HCAPLUS  
 CN Butanoic acid, 4-[(3-cyano-4,6-diphenyl-2-pyridinyl)thio]-3-oxo-, 1-methylethyl ester (CA INDEX NAME)



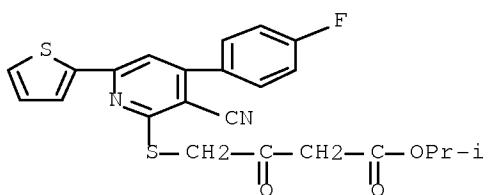
RN 290299-76-2 HCAPLUS

CN Butanoic acid, 4-[[3-cyano-4-(4-methoxyphenyl)-6-phenyl-2-pyridinyl]thio]-3-oxo-, 1-methylethyl ester (CA INDEX NAME)



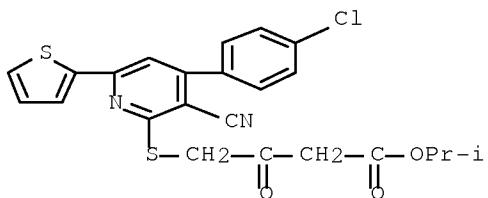
RN 290299-77-3 HCAPLUS

CN Butanoic acid, 4-[[3-cyano-4-(4-fluorophenyl)-6-(2-thienyl)-2-pyridinyl]thio]-3-oxo-, 1-methylethyl ester (CA INDEX NAME)



RN 290299-78-4 HCAPLUS

CN Butanoic acid, 4-[[4-(4-chlorophenyl)-3-cyano-6-(2-thienyl)-2-pyridinyl]thio]-3-oxo-, 1-methylethyl ester (CA INDEX NAME)



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L57 ANSWER 23 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:547305 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 131:295109

TITLE: Derivatives of 3-cyano-6-phenyl-4-(3'-pyridyl)-pyridine-2(1H)-thione and their neurotropic activity

AUTHOR(S): Krauze, Aivars; Germane, Skaidrite; Eberlins, Ojars; Sturms, Igors; Klusa, Vija; Duburs, Gunars

CORPORATE SOURCE: Latvian Institute of Organic Synthesis, Riga, LV-1006, Latvia

SOURCE: European Journal of Medicinal Chemistry ([1999](#))

), 34(4), 301-310

CODEN: EJMCA5; ISSN: 0223-5234

PUBLISHER: Editions Scientifiques et Medicales Elsevier

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 31 Aug 1999

AB 3-Cyano-6-phenyl-4-(3'-pyridyl)pyridine-2(1H)-thione, the related 2,2'-bis-pyridyldisulfide, 2-alkylthiopyridines and 2-amino-thieno[2,3- b]pyridines were synthesized and their neurotropic activities were examined. Bispyridyldisulfide exhibited low toxicity (LD<sub>50</sub> > 5000 mg/kg, ICR mice, i.p.) and selective antiamnesic activity at the doses of 0.05-0.5 mg/kg p.o. This effect was significantly higher than that induced by Piracetam at 50 mg/kg.

CC 1-3 (Pharmacology)

Section cross-reference(s): 27

IT 247056-20-8P 247056-23-1P 247056-24-2P 247056-25-3P247056-26-4P 247056-27-5P 247056-28-6P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(preparation and neurotropic activity of 3-cyano-6-phenyl-4-(3'-pyridyl)-pyridine-2(1H)-thione derivs.)

IT 247056-22-0P 247056-30-0P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation and neurotropic activity of 3-cyano-6-phenyl-4-(3'-pyridyl)-pyridine-2(1H)-thione derivs.)

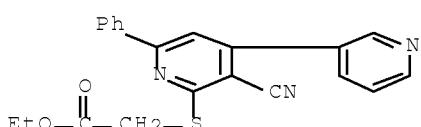
IT 247056-25-3P 247056-27-5P 247056-28-6P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(preparation and neurotropic activity of 3-cyano-6-phenyl-4-(3'-pyridyl)-pyridine-2(1H)-thione derivs.)

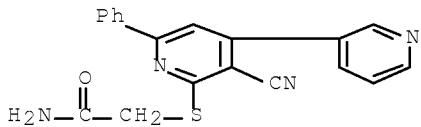
RN 247056-25-3 HCPLUS

CN Acetic acid, 2-[(3'-cyano-6'-phenyl[3,4'-bipyridin]-2'-yl)thio]-, ethyl ester (CA INDEX NAME)

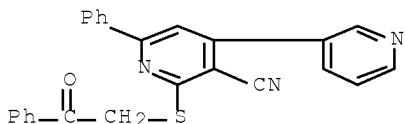


RN 247056-27-5 HCPLUS

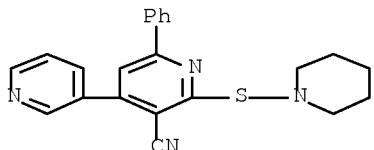
CN Acetamide, 2-[(3'-cyano-6'-phenyl[3,4'-bipyridin]-2'-yl)thio]- (CA INDEX NAME)



RN 247056-28-6 HCAPLUS  
 CN [3,4'-Bipyridine]-3'-carbonitrile, 2'-(2-oxo-2-phenylethyl)thio]-6'-phenyl- (CA INDEX NAME)



IT 247056-22-0P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation and neurotropic activity of 3-cyano-6-phenyl-4-(3'-pyridyl)-  
 pyridine-2(1H)-thione derivs.)  
 RN 247056-22-0 HCAPLUS  
 CN [3,4'-Bipyridine]-3'-carbonitrile, 6'-phenyl-2'-(1-piperidinylthio)- (CA  
 INDEX NAME)



REFERENCE COUNT: 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L57 ANSWER 24 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1999:148064 HCAPLUS Full-text  
 DOCUMENT NUMBER: 130:252289  
 TITLE: Synthesis and biological screening of new  
 1,3-diphenylpyrazoles with different heterocyclic  
 moieties at position 4  
 AUTHOR(S): El-Emary, T. I.; Bakhite, Etify A.  
 CORPORATE SOURCE: Chemistry Department, Faculty Science, Assiut  
 University, Assiut, 71516, Egypt  
 SOURCE: Pharmazie (1999), 54(2), 106-111  
 PUBLISHER: Govi-Verlag Pharmazeutischer Verlag  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 130:252289  
 ED Entered STN: 08 Mar 1999  
 AB 1,3-Diphenyl-1H-pyrazole-4-carboxaldehyde (I) was reacted with barbituric acid, thiobarbituric acid, some activated nitriles, and/or PhAc to give the resp. condensation products. The reaction of I with N2H4.H2O, semicarbazide, or thiosemicarbazide afforded the corresponding azomethines. Most of the new compds. used as key intermediates in the synthesis subjected for different sequence reactions to produce of the title compds. The antibacterial and antifungal activity of some selected derivs. were evaluated.  
 CC 28-8 (Heterocyclic Compounds (More Than One Hetero Atom))  
 Section cross-reference(s): 10

IT Antibacterial agents  
Fungicides  
 (preparation and antimicrobial activity of pyrazoles with heterocyclic moieties)

IT Heterocyclic compounds  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and antimicrobial activity of pyrazoles with heterocyclic moieties)

IT 221619-42-7P 221619-54-1P  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and antimicrobial activity of pyrazoles with heterocyclic moieties)

IT 221619-36-9P 221619-39-2P 221619-48-3P 221619-55-2P 221619-56-3P  
 221619-58-5P 221619-59-6P 221619-60-9P 221619-61-0P  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)  
 (preparation and antimicrobial activity of pyrazoles with heterocyclic moieties)

IT 57-56-7, Semicarbazide 61-82-5, 3-Amino-s-triazole 62-56-6, Thiourea, reactions 67-52-7, Barbituric acid 70-11-1,  $\alpha$ -Bromoacetophenone 79-07-2, Chloroacetamide 79-19-6, Thiosemicarbazide 89-25-8, 3-Methyl-1-phenyl-2-pyrazolin-5-one 100-52-7, Benzaldehyde, reactions 105-39-5, Ethyl chloroacetate 105-56-6, Ethyl cyanoacetate 109-77-3, Malononitrile 141-97-9, Ethyl acetoacetate 302-01-2, Hydrazine, reactions 504-17-6, Thiobarbituric acid 614-16-4, Benzoylacetone nitrile 5445-17-0, Methyl 2-bromopropionate 7357-70-2, Cyanothioacetamide 21487-45-6 144118-63-8  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation and antimicrobial activity of pyrazoles with heterocyclic moieties)

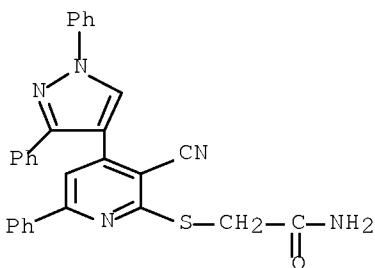
IT 221619-37-0P 221619-38-1P 221619-40-5P 221619-46-1P 221619-49-4P  
221619-50-7P 221619-52-9P 221619-53-0P 221619-57-4P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and antimicrobial activity of pyrazoles with heterocyclic moieties)

IT 221619-35-8P 221619-41-6P 221619-43-8P 221619-44-9P 221619-45-0P  
 221619-47-2P 221619-51-8P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation and antimicrobial activity of pyrazoles with heterocyclic moieties)

IT 221619-54-1P  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and antimicrobial activity of pyrazoles with heterocyclic moieties)

RN 221619-54-1 HCPLUS

CN Acetamide, 2-[[3-cyano-4-(1,3-diphenyl-1H-pyrazol-4-yl)-6-phenyl-2-pyridinyl]thio]- (CA INDEX NAME)

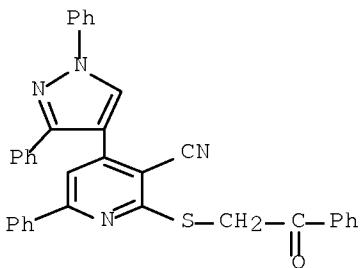


IT 221619-52-9P 221619-53-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and antimicrobial activity of pyrazoles with heterocyclic moieties)

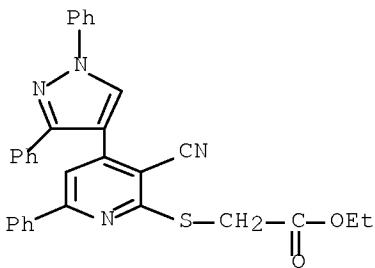
RN 221619-52-9 HCAPLUS

CN 3-Pyridinecarbonitrile, 4-(1,3-diphenyl-1H-pyrazol-4-yl)-2-[(2-oxo-2-phenylethyl)thio]-6-phenyl- (CA INDEX NAME)



RN 221619-53-0 HCAPLUS

CN Acetic acid, 2-[(3-cyano-4-(1,3-diphenyl-1H-pyrazol-4-yl)-6-phenyl-2-pyridinyl)thio]-, ethyl ester (CA INDEX NAME)

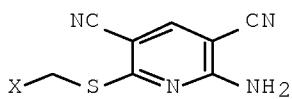


REFERENCE COUNT:

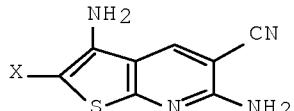
20

THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ACCESSION NUMBER: 1999:83128 HCAPLUS Full-text  
 DOCUMENT NUMBER: 130:223316  
 TITLE: Intramolecular cyclization of 2-(o-carboran-1-yl)methylthio-3-cyanopyridines in basic conditions  
 AUTHOR(S): Semioshkin, A. A.; Artemov, V. A.; Ivanov, V. L.; Ptashits, G. M.; Petrovskii, P. V.; Shestopalov, A. M.; Bregadze, V. I.; Litvinov, V. P.  
 CORPORATE SOURCE: A. N. Nesmeyanov Institute of Elementoorganic Chemistry, Russian Academy of Sciences, Moscow, 117813, Russia  
 SOURCE: Chemistry of Heterocyclic Compounds (New York) (Translation of Khimiya Geterotsiklicheskikh Soedinenii) (1998), 34(6), 688-691  
 CODEN: CHCCAL; ISSN: 0009-3122  
 PUBLISHER: Consultants Bureau  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 130:223316  
 ED Entered STN: 09 Feb 1999  
 GI



I



II

AB Substituted 2-(o-carboran-1-yl)methylthio-3-cyanopyridines, e.g. I ( $X = o$ -carboran-1-yl), and -pyrimidines undergo Thorpe-Ziegler cyclization under the influence of KOH in DMF to give the corresponding thienopyridines, e.g. II ( $X = \text{same}$ ), and thienopyrimidines. The reaction is complicated by a side reaction in which the closo-carborane nucleus is converted to a nido-system. The yield of thienopyridines containing a closo-carborane unit is increased by introduction of an acceptor substituent in the pyridine ring. Destruction of the closo-carborane nucleus is not observed with the pyrimidine derivs. The structures of the series of new carborane-containing thienopyridines and pyrimidines was confirmed by spectroscopic methods.

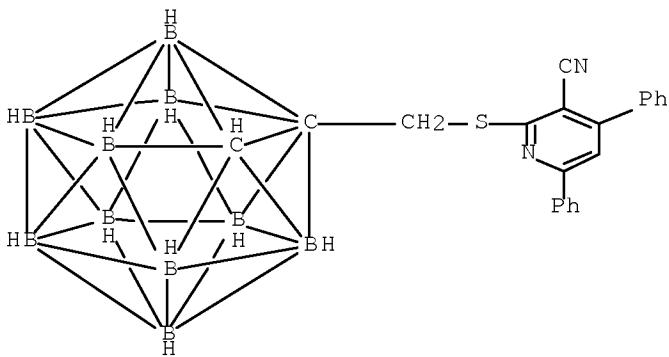
CC 29-4 (Organometallic and Organometalloidal Compounds)  
 Section cross-reference(s): 28

IT 193203-25-7 ~~193203-26-8~~ 193203-29-1  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (intramol. cyclization of (carboranyl)methylthiocyanopyridines in basic conditions)

IT ~~193203-26-8~~  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (intramol. cyclization of (carboranyl)methylthiocyanopyridines in basic conditions)

RN 193203-26-8 HCAPLUS

CN 3-Pyridinecarbonitrile, 2-[(1,2-dicarbadodecaboran(12)-1-ylmethyl)thio]-4,6-diphenyl- (9CI) (CA INDEX NAME)

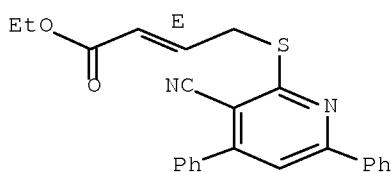


REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib ed abs hitind hitstr 26-49  
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, USPATFULL' - CONTINUE? (Y)/N:y

L57 ANSWER 26 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:617973 HCAPLUS Full-text  
 DOCUMENT NUMBER: 129:302574  
 ORIGINAL REFERENCE NO.: 129:61723a,61726a  
 TITLE: Ethyl 4-bromocrotonate in the synthesis of pyrido[3',2':4,5]thieno[3,2-d]pyridin-2(1H)-ones  
 Ivanov, V. L.; Artemov, V. A.; Shestopalov, A. M.;  
 Litvinov, V. P.  
 AUTHOR(S):  
 CORPORATE SOURCE: N. D. Zelinskii Institute of Organic Chemistry,  
 Russian Academy of Sciences, Moscow, 119913, Russia  
 SOURCE: Chemistry of Heterocyclic Compounds (New  
 York) (Translation of Khimiya Geterotsiklicheskikh  
 Soedinenii) (1998), 34(2), 237-240  
 CODEN: CHCCAL; ISSN: 0009-3122  
 PUBLISHER: Consultants Bureau  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 ED Entered STN: 30 Sep 1998  
 AB Pyrido[3',2':4,5]thieno[3,2-d]pyridin-2(1H)-ones were synthesized from 3-cyano-2(1H)-pyridinethiones and Et 4-bromocrotonate.  
 CC 28-2 (Heterocyclic Compounds (More Than One Hetero Atom))  
 IT 214423-11-7P 214423-14-0P 214423-15-1P 214423-16-2P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation of pyridothienopyridinone and thienopyridines)  
 IT 214423-14-0P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation of pyridothienopyridinone and thienopyridines)  
 RN 214423-14-0 HCAPLUS  
 CN 2-Butenoic acid, 4-[(3-cyano-4,6-diphenyl-2-pyridinyl)thio]-, ethyl ester,  
 (2E)- (CA INDEX NAME)

Double bond geometry as shown.



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L57 ANSWER 27 OF 51 HCPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:269236 HCPLUS Full-text

DOCUMENT NUMBER: 133:58731

TITLE: Reactions of styryl thienyl ketone, styryl furyl ketone with thiocyanoacetamide: synthesis of several new pyridines, thieno[2,3-b]pyridines, pyrido[2',3':4,5]thieno[3,2-c]pyridazines and pyrido[3',2':4,5]thieno[3,2-d]pyrimidinone derivatives

AUTHOR(S): Attaby, Fawzy A.

CORPORATE SOURCE: Department of chemistry, Faculty of Science, Cairo University, Giza, Egypt

SOURCE: Phosphorus, Sulfur and Silicon and the Related Elements (1998), 139, 1-12

CODEN: PSSLEC; ISSN: 1042-6507

PUBLISHER: Gordon & Breach Science Publishers

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 133:58731

ED Entered STN: 26 Apr 2000

AB Styryl thienyl ketone and styryl furyl ketone reacted with thiocyanoacetamide to give the dihydropyridinethiones, which were used as starting material for the synthesis of several heterocyclic compds. Reaction with several halo esters, halo ketones, and chloroacetamide gave 2-S-alkoylpyridines, thieno[2,3-c]pyridines, pyrido[2',3',4:5]thieno[2,3-c]pyridazines, and pyrido[2',3':4,5]thieno[2,3-d]pyrimidinones.

CC 28-1 (Heterocyclic Compounds (More Than One Hetero Atom))

IT 126888-03-7P 131841-89-9P 188782-65-2P 276671-06-8P 276671-07-9P

276671-08-0P 276671-09-1P 276671-10-4P 276671-11-5P

276671-14-8P 276671-15-9P 276671-16-0P

276671-17-1P 276671-19-3P 276671-20-6P

276671-21-7P 276671-28-4P 276671-29-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of pyridines, thieno[2,3-b]pyridines, pyrido[2',3':4,5]thieno[3,2-c]pyridazines and pyrido[3',2':4,5]thieno[3,2-d]pyrimidinones)

IT 276671-14-8P 276671-15-9P 276671-16-0P

276671-17-1P 276671-19-3P 276671-20-6P

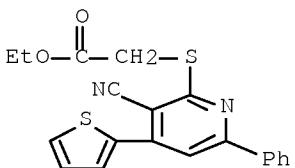
276671-28-4P 276671-29-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of pyridines, thieno[2,3-b]pyridines, pyrido[2',3':4,5]thieno[3,2-c]pyridazines and pyrido[3',2':4,5]thieno[3,2-d]pyrimidinones)

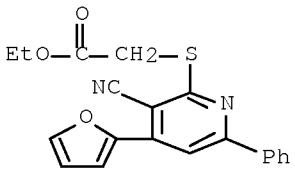
RN 276671-14-8 HCAPLUS

CN Acetic acid, 2-[ [3-cyano-6-phenyl-4-(2-thienyl)-2-pyridinyl]thio]-, ethyl ester (CA INDEX NAME)



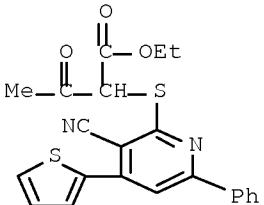
RN 276671-15-9 HCAPLUS

CN Acetic acid, 2-[ [3-cyano-4-(2-furanyl)-6-phenyl-2-pyridinyl]thio]-, ethyl ester (CA INDEX NAME)



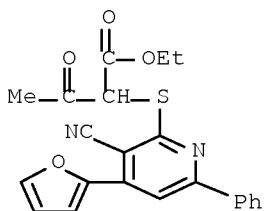
RN 276671-16-0 HCAPLUS

CN Butanoic acid, 2-[ [3-cyano-6-phenyl-4-(2-thienyl)-2-pyridinyl]thio]-3-oxo-, ethyl ester (CA INDEX NAME)

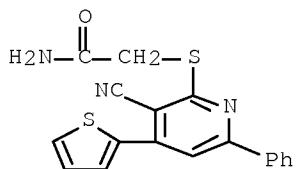


RN 276671-17-1 HCAPLUS

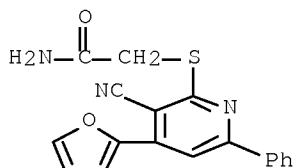
CN Butanoic acid, 2-[ [3-cyano-4-(2-furanyl)-6-phenyl-2-pyridinyl]thio]-3-oxo-, ethyl ester (CA INDEX NAME)



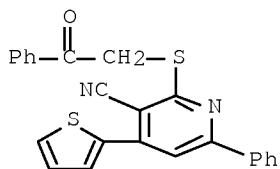
RN 276671-19-3 HCAPLUS  
 CN Acetamide, 2-[3-cyano-6-phenyl-4-(2-thienyl)-2-pyridinyl]thio]- (CA INDEX NAME)



RN 276671-20-6 HCAPLUS  
 CN Acetamide, 2-[3-cyano-4-(2-furanyl)-6-phenyl-2-pyridinyl]thio]- (CA INDEX NAME)

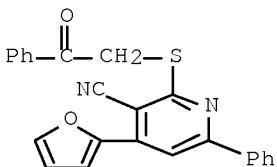


RN 276671-28-4 HCAPLUS  
 CN 3-Pyridinecarbonitrile, 2-[(2-oxo-2-phenylethyl)thio]-6-phenyl-4-(2-thienyl)- (CA INDEX NAME)



RN 276671-29-5 HCAPLUS  
 CN 3-Pyridinecarbonitrile, 4-(2-furanyl)-2-[(2-oxo-2-phenylethyl)thio]-6-

phenyl- (CA INDEX NAME)



REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L57 ANSWER 28 OF 51 HCPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:407487 HCPLUS Full-text

DOCUMENT NUMBER: 127:135826

ORIGINAL REFERENCE NO.: 127:26209a,26212a

TITLE: Nucleophilic substitution at  $\alpha$ -methylene group attached to o-carboranes. Synthesis of carboranyl methylthiopyridines

AUTHOR(S): Semioshkin, Andrei A.; Ptashits, Gennadii M.; Ivanov, Vladimir L.; Artyomov, Vasilii, A.; Shestopalov, Anatolii M.; Bregadze, Vladimir; Litvinov, Viktor P.

CORPORATE SOURCE: A.N.Nesmeyanov Inst. Organoelement Compds., Moscow, 117813, Russia

SOURCE: Tetrahedron (1997), 53(23), 7911-7916

CODEN: TETRAB; ISSN: 0040-4020

PUBLISHER: Elsevier

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 127:135826

ED Entered STN: 02 Jul 1997

AB The SN2-type substitution on bromomethyl-o-carborane was never reported earlier. It was found that pyridine-2(1H)-thiones react with bromomethyl-o-carborane in the presence of triethylamine. This reaction leads to the o-carboranyl methylthiopyridines with high yields. A series of the novel o-carboranyl methylthiopyridines was synthesized and characterized by various spectral methods.

CC 29-4 (Organometallic and Organometalloidal Compounds)

Section cross-reference(s): 27

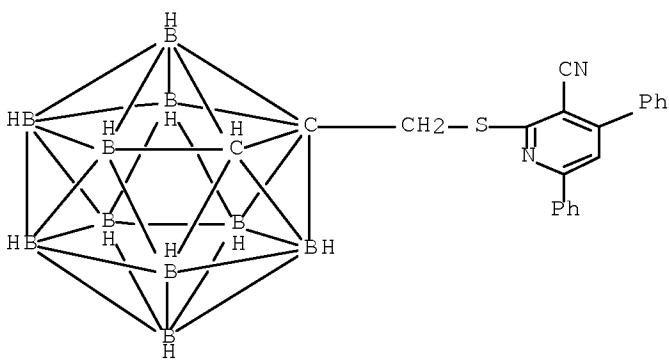
IT 193203-25-7P 193203-26-8P 193203-28-0P 193203-29-1P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

IT 193203-26-8P 193203-28-0P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

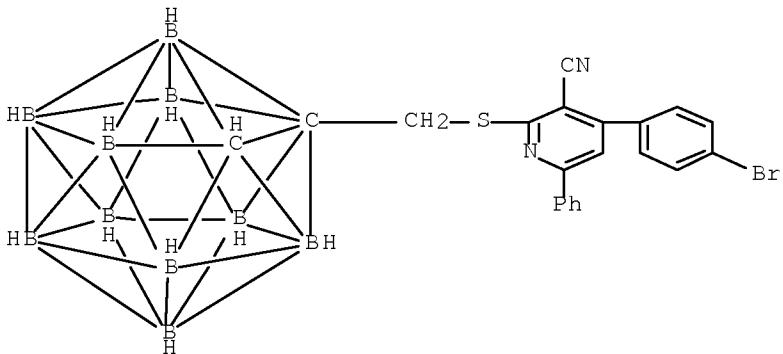
RN 193203-26-8 HCPLUS

CN 3-Pyridinecarbonitrile, 2-[(1,2-dicarbadodecaboran(12)-1-ylmethyl)thio]-4,6-diphenyl- (9CI) (CA INDEX NAME)



RN 193203-28-0 HCAPLUS

CN 3-Pyridinecarbonitrile, 4-(4-bromophenyl)-2-[(1,2-dicarbadodecaboran(12)-1-ylmethyl)thio]-6-phenyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L57 ANSWER 29 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:19324 HCAPLUS Full-text

DOCUMENT NUMBER: 128:114920

ORIGINAL REFERENCE NO.: 128:22533a,22536a

TITLE: N-Acetylchloroacetamide in the synthesis of functionally substituted pyrido[3',2':4,5]thieno[3,2-d]pyrimidin-4(3H)-ones

AUTHOR(S): Ivanov, V. L.; Artemov, V. A.; Shestopalov, A. M.; Litvinov, V. P.

CORPORATE SOURCE: Russian Academy Sci., N. D. Zelinskii Inst. Org. Chem., Moscow, 117913, Russia

SOURCE: Chemistry of Heterocyclic Compounds (New York) (Translation of Khimiya Geterotsiklicheskikh Soedinenii) (1997), 33(6), 732-735

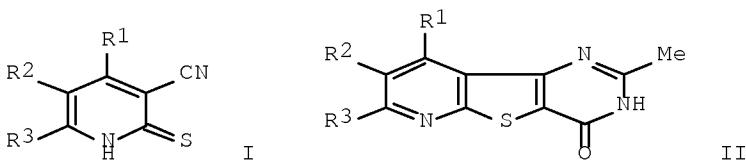
CODEN: CHCCAL; ISSN: 0009-3122

PUBLISHER: Consultants Bureau

DOCUMENT TYPE: Journal

LANGUAGE: English

ED      Entered STN:  15 Jan 1998  
GI



AB 3-Cyano-2(1H)-pyridinethiones I [R1 = CF<sub>3</sub>, Ph, H, Me, R2 = H, R3 = Ph, Me, R<sub>2</sub>R<sub>3</sub> = (CH<sub>2</sub>)<sub>6</sub>, (CH<sub>2</sub>)<sub>3</sub>] react with N-acetylchloroacetamide in ethanol in the presence of KOH to give pyrido[3',2':4,5]thieno[3,2-d]pyrimidin-4(3H)-ones II.

CC 28-16 (Heterocyclic Compounds (More Than One Hetero Atom))

IT 201681-20-1P 201681-21-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of pyridothienenopyrimidinones by cyclocondensation of acetylchloroacetamide with cyanopyridinethiones)

IT 201681-21-2P

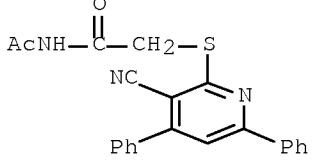
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

## (preparation of p-

RN 201681-21-2 HCAPLUS acetylchloroacetamide with cyanopyridinethiones)

CN Acetamide, N-acetyl-

NAME )



REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L57 ANSWER 30 OF 51 HCPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:263388 HCPLUS Full-text

DOCUMENT NUMBER: 126:263993

ORIGINAL REFERENCE NO.: 126:51129a, 51132a

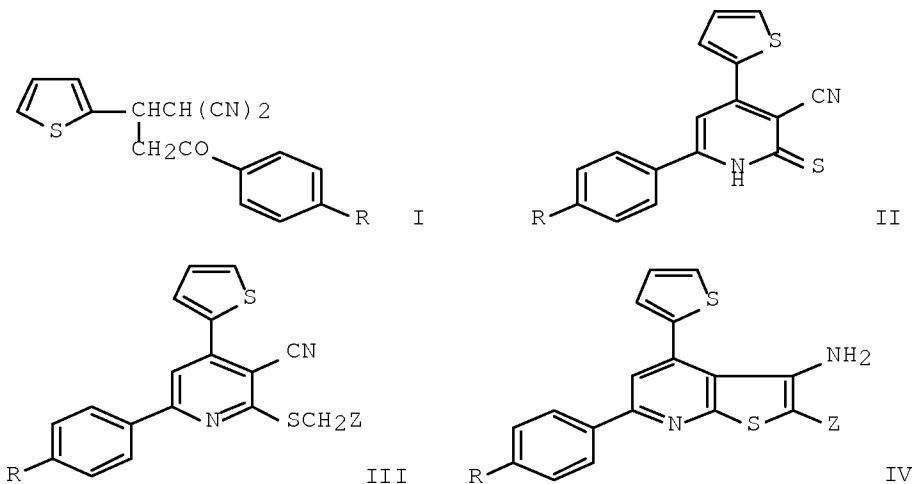
TITLE: Cyclization reaction of nitriles. LVI. Synthesis and conversion of substituted 6-aryl-4-(2-thienyl)-3-cyanopyridine-2(1H)-thiones

AUTHOR(S): Sharanin, Yu. A.; Matrosova, S. V.

CORPORATE SOURCE: Vost.-Ukr. Univ., Luhansk, 348011, Ukraine

SOURCE: Zhurnal Organicheskoi Khimii (1996), 32(8),  
1251-1255

PUBLISHER: Nauka  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 OTHER SOURCE(S): CASREACT 126:263993  
 ED Entered STN: 24 Apr 1997  
 GI



AB Reaction of dinitriles I ( $R = H, Cl$ ) with S8/morpholine gave the title compds. (II), which reacted with halomethyl compds. to give S-alkylated derivs. (III;  $R = H, Cl; Z = CONH_2, COOEt, COPh$ ). III were cyclized in the presence of NaOEt to give thienopyridines (IV).

CC 27-16 (Heterocyclic Compounds (One Hetero Atom))

Section cross-reference(s): 28

IT 188782-56-1P 188782-57-2P 188782-58-3P  
 188782-59-4P 188782-61-8P 188782-63-0P  
 188782-74-3P 188782-75-4P 188782-76-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and cyclization of)

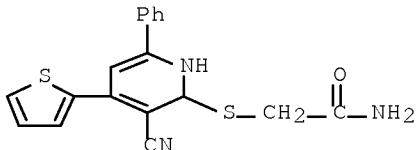
IT 188782-56-1P 188782-57-2P 188782-58-3P  
 188782-59-4P 188782-61-8P 188782-63-0P  
 188782-74-3P 188782-75-4P 188782-76-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and cyclization of)

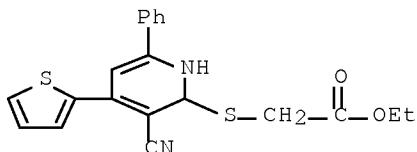
RN 188782-56-1 HCPLUS

CN Acetamide, 2-[3-cyano-1,2-dihydro-6-phenyl-4-(2-thienyl)-2-pyridinyl]thio]- (CA INDEX NAME)



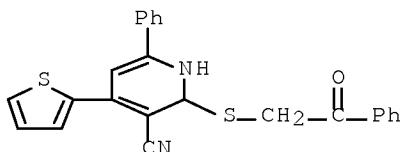
RN 188782-57-2 HCAPLUS

CN Acetic acid, 2-[3-cyano-1,2-dihydro-6-phenyl-4-(2-thienyl)-2-pyridinyl]thio]-, ethyl ester (CA INDEX NAME)



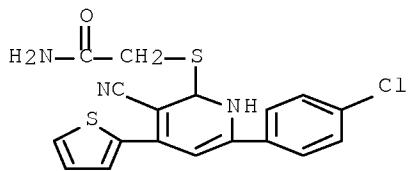
RN 188782-58-3 HCAPLUS

CN 3-Pyridinecarbonitrile, 1,2-dihydro-2-[ (2-oxo-2-phenylethyl)thio]-6-phenyl-4-(2-thienyl)- (CA INDEX NAME)



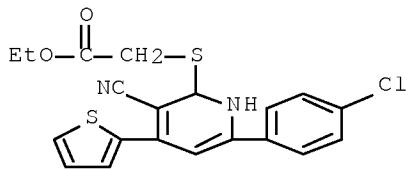
RN 188782-59-4 HCAPLUS

CN Acetamide, 2-[6-(4-chlorophenyl)-3-cyano-1,2-dihydro-4-(2-thienyl)-2-pyridinyl]thio]- (CA INDEX NAME)

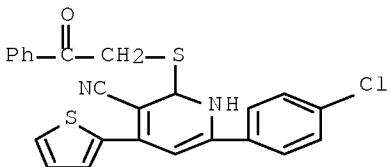


RN 188782-61-8 HCAPLUS

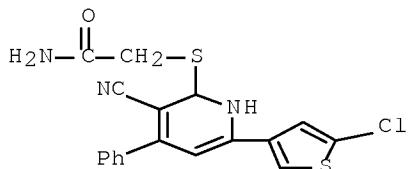
CN Acetic acid, 2-[6-(4-chlorophenyl)-3-cyano-1,2-dihydro-4-(2-thienyl)-2-pyridinyl]thio]-, ethyl ester (CA INDEX NAME)



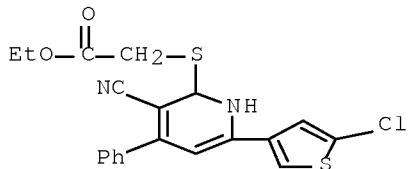
RN 188782-63-0 HCAPLUS  
 CN 3-Pyridinecarbonitrile, 6-(4-chlorophenyl)-1,2-dihydro-2-[(2-oxo-2-phenylethyl)thio]-4-(2-thienyl)- (CA INDEX NAME)



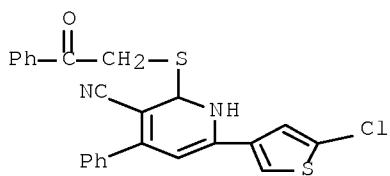
RN 188782-74-3 HCAPLUS  
 CN Acetamide, 2-[(6-(5-chloro-3-thienyl)-3-cyano-1,2-dihydro-4-phenyl-2-pyridinyl]thio]- (CA INDEX NAME)



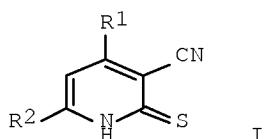
RN 188782-75-4 HCAPLUS  
 CN Acetic acid, 2-[(6-(5-chloro-3-thienyl)-3-cyano-1,2-dihydro-4-phenyl-2-pyridinyl]thio]-, ethyl ester (CA INDEX NAME)



RN 188782-76-5 HCAPLUS  
 CN 3-Pyridinecarbonitrile, 6-(5-chloro-3-thienyl)-1,2-dihydro-2-[(2-oxo-2-phenylethyl)thio]-4-phenyl- (CA INDEX NAME)



L57 ANSWER 31 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1997:279011 HCAPLUS Full-text  
 DOCUMENT NUMBER: 126:293254  
 ORIGINAL REFERENCE NO.: 126:56789a,56792a  
 TITLE: Synthesis and reactions of 3-cyano-6-cyclopropyl-2(1H)-pyridinethiones  
 AUTHOR(S): Khoroshilov, G. E.; Sharanin, Yu. A.  
 CORPORATE SOURCE: Lugansk Pedagog. Inst., Luhansk, Ukraine  
 SOURCE: Ukrainskii Khimicheskii Zhurnal (Russian Edition) (1996), 62(9-10), 38-44  
 CODEN: UKZHAU; ISSN: 0041-6045  
 PUBLISHER: Institut Obshchey i Neorganicheskoy Khimii NAN Ukrayny  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 OTHER SOURCE(S): CASREACT 126:293254  
 ED Entered STN: 01 May 1997  
 GI



AB The title compds. [I; R1 = (un)substituted phenyl; R2 = cyclopropyl, Ph] were prepared (1) by reaction of oxo dinitriles with S8 and (2) by reaction of butadienedicarbonitriles with cyanothioacetamide. S-alkylation of I and subsequent cyclization to thienopyridines were carried out.

CC 27-16 (Heterocyclic Compounds (One Hetero Atom))  
 Section cross-reference(s): 28

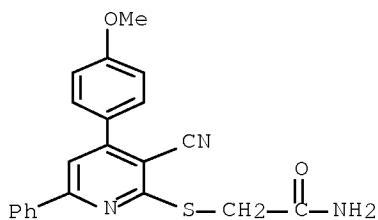
IT 94360-69-7P 189132-37-4P 189132-38-5P 189132-39-6P  
 189132-40-9P 189132-41-0P 189132-42-1P 189132-43-2P 189132-44-3P  
 189132-45-4P 189132-46-5P 189132-47-6P 189132-48-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and cyclization of)

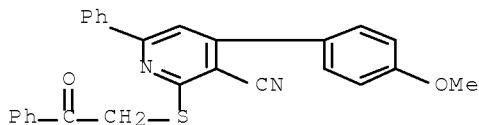
IT 94360-69-7P 189132-48-7P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and cyclization of)

RN 94360-69-7 HCAPLUS

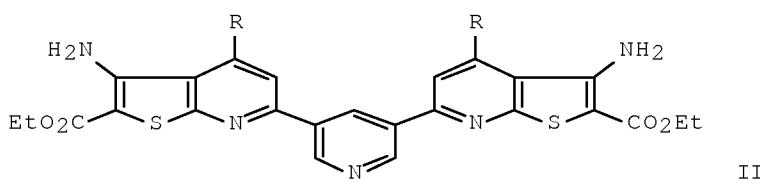
CN Acetamide, 2-[3-cyano-4-(4-methoxyphenyl)-6-phenyl-2-pyridinyl]thio]-  
 (CA INDEX NAME)



RN 189132-48-7 HCAPLUS  
 CN 3-Pyridinecarbonitrile, 4-(4-methoxyphenyl)-2-[(2-oxo-2-phenylethyl)thio]-6-phenyl- (CA INDEX NAME)



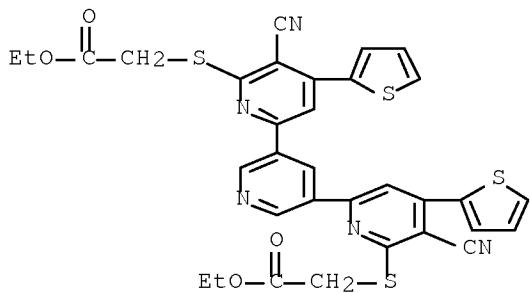
L57 ANSWER 32 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1995:694430 HCAPLUS Full-text  
 DOCUMENT NUMBER: 123:313812  
 ORIGINAL REFERENCE NO.: 123:56255a,56258a  
 TITLE: Synthesis of 3,5-disubstituted pyridines as antimicrobial agents  
 AUTHOR(S): Attia, A.; Abo-Ghalia, M. H.; El-Salam, O. I. Abd  
 CORPORATE SOURCE: Dep. Appl. Org. Chem., Natl. Res. Cent., Cairo, Egypt  
 SOURCE: Pharmazie (1995), 50(7), 455-9  
 CODEN: PHARAT; ISSN: 0031-7144  
 PUBLISHER: Govi-Verlag Pharmazeutischer Verlag  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 ED Entered STN: 22 Jul 1995  
 GI



AB 3,5-Diacetylpyridine (I) reacted with hydroxylamine hydrochloride, thiourea or phenylhydrazine affording the corresponding carbaldoximo- aminothiazolyl-

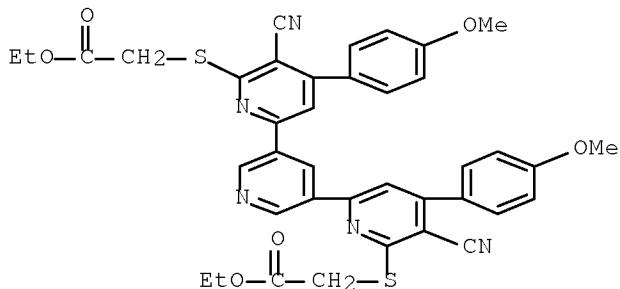
phenylhydrazone- derivs., resp. Cyclization of phenylhydrazone derivative of I by the action of polyphosphoric acid or thionyl chloride afforded the corresponding indolyl- and thiadiazolyl- derivs. Also prepared were thieno[2,3-b]pyridines II (R = 2-thienyl, 4-MeOC<sub>6</sub>H<sub>4</sub>). Some of the obtained compds. showed remarkable antimicrobial activity comparable to oxytetracycline.

CC 28-2 (Heterocyclic Compounds (More Than One Hetero Atom))  
 Section cross-reference(s): 10  
 IT Bactericides, Disinfectants, and Antiseptics  
Fungicides and Fungistats  
 (synthesis of 3,5-disubstituted pyridines as antimicrobial agents)  
 IT 39081-53-3P 170160-78-8P 170160-79-9P 170160-80-2P 170160-84-6P  
 170160-85-7P 170160-86-8P 170160-87-9P 170160-88-0P 170160-89-1P  
170160-90-4P 170160-91-5P  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)  
 (synthesis of 3,5-disubstituted pyridines as antimicrobial agents)  
 IT 102547-82-0P 170160-74-4P 170160-76-6P 170160-77-7P 170160-81-3P  
 170160-82-4P 170160-83-5P 170160-92-6P 170160-93-7P 170160-94-8P  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)  
 (synthesis of 3,5-disubstituted pyridines as antimicrobial agents)  
 IT 98-03-3, 2-Thiophenecarboxaldehyde 100-52-7, Benzaldehyde, reactions 105-39-5, Ethyl 2-chloroacetate 123-11-5, p-Methoxybenzaldehyde, reactions 500-22-1, 3-Pyridinecarboxaldehyde 623-51-8, Ethyl 2-mercaptopropionate 1199-61-7, 3,5-Diacetylpyridine  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (synthesis of 3,5-disubstituted pyridines as antimicrobial agents)  
 IT 170160-75-5P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (synthesis of 3,5-disubstituted pyridines as antimicrobial agents)  
 IT 170160-90-4P 170160-91-5P  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)  
 (synthesis of 3,5-disubstituted pyridines as antimicrobial agents)  
 RN 170160-90-4 HCPLUS  
 CN Acetic acid, 2,2'-(5,5''-dicyano-4,4''-di-2-thienyl[2,3':5',2''-terpyridine]-6,6''-diyl)bis(thio)bis-, diethyl ester (9CI) (CA INDEX NAME)



RN 170160-91-5 HCAPLUS

CN Acetic acid, 2,2'-[5,5''-dicyano-4,4''-bis(4-methoxyphenyl)[2,3':5',2'''-terpyridine]-6,6''-diyl]bis(thio)bis-, diethyl ester (9CI) (CA INDEX NAME)



L57 ANSWER 33 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1994:557485 HCAPLUS Full-text

DOCUMENT NUMBER: 121:157485

ORIGINAL REFERENCE NO.: 121:28509a,28512a

TITLE: Synthesis of some 2-(substituted thio)pyridines and  
thieno[2,3-b]pyridines

AUTHOR(S): Abdel-Monem, Maisa I.

CORPORATE SOURCE: Fac. Sci., Assiut Univ., Assiut, 71516, Egypt

SOURCE: Collection of Czechoslovak Chemical Communications (1994), 59(4), 978-86

CODEN: CCCCAK; ISSN: 0010-0765

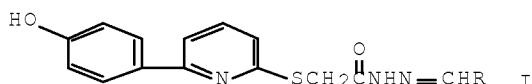
DOCUMENT TYPE: Journal

LANGUAGE: English

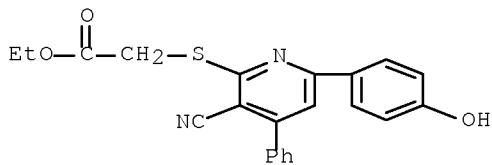
OTHER SOURCE(S): CASREACT 121:157485

ED Entered STN: 01 Oct 1994

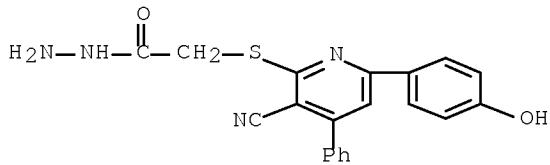
GI



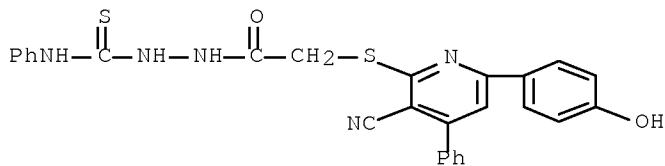
AB The title compds., 2-pyridinethiol derivs., such as I (R = aryl) were prepared  
 CC 27-16 (Heterocyclic Compounds (One Hetero Atom))  
 IT 157222-84-9P 157222-85-0P 157222-86-1P 157222-87-2P 157222-88-3P  
 157222-89-4P 157222-90-7P 157222-91-8P 157222-92-9P 157222-93-0P  
 157222-94-1P 157222-95-2P 157222-96-3P  
 157222-97-4P 157222-98-5P 157222-99-6P  
 157223-00-2P 157223-01-3P 157223-02-4P 157223-03-5P  
 157223-04-6P 157223-05-7P 157223-06-8P 157223-07-9P  
 157223-08-0P 157223-09-1P 157223-10-4P  
 157223-11-5P 157223-12-6P 157223-13-7P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 IT 157222-94-1P 157222-95-2P 157222-96-3P  
 157222-97-4P 157222-98-5P 157222-99-6P  
 157223-00-2P 157223-07-9P 157223-08-0P  
 157223-10-4P 157223-11-5P 157223-12-6P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 157222-94-1 HCPLUS  
 CN Acetic acid, 2-[[3-cyano-6-(4-hydroxyphenyl)-4-phenyl-2-pyridinyl]thio]-,  
 ethyl ester (CA INDEX NAME)



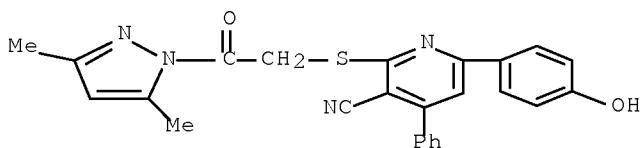
RN 157222-95-2 HCPLUS  
 CN Acetic acid, 2-[[3-cyano-6-(4-hydroxyphenyl)-4-phenyl-2-pyridinyl]thio]-,  
 hydrazide (CA INDEX NAME)



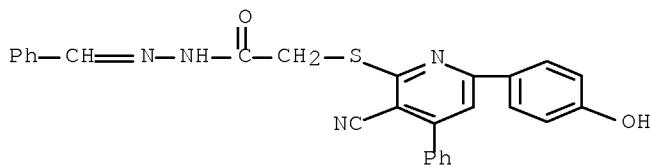
RN 157222-96-3 HCPLUS  
 CN Acetic acid, 2-[[3-cyano-6-(4-hydroxyphenyl)-4-phenyl-2-pyridinyl]thio]-,  
 2-[(phenylamino)thioxomethyl]hydrazide (CA INDEX NAME)



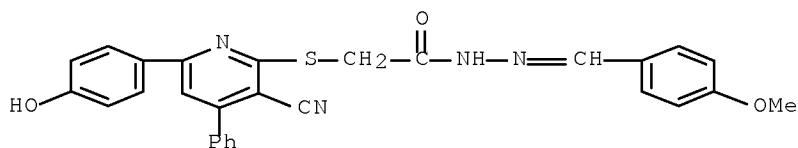
RN 157222-97-4 HCAPLUS  
 CN 3-Pyridinecarbonitrile, 2-[(2-(3,5-dimethyl-1H-pyrazol-1-yl)-2-oxoethyl)thio]-6-(4-hydroxyphenyl)-4-phenyl- (CA INDEX NAME)



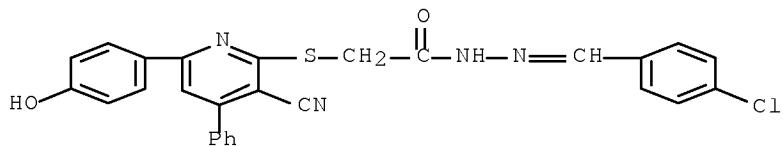
RN 157222-98-5 HCAPLUS  
 CN Acetic acid, 2-[(3-cyano-6-(4-hydroxyphenyl)-4-phenyl-2-pyridinyl)thio]-, 2-(phenylmethylene)hydrazide (CA INDEX NAME)



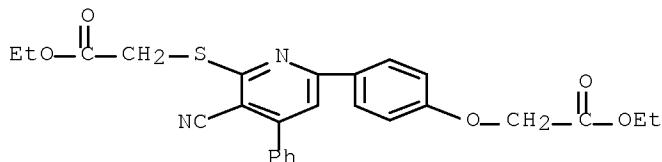
RN 157222-99-6 HCAPLUS  
 CN Acetic acid, 2-[(3-cyano-6-(4-hydroxyphenyl)-4-phenyl-2-pyridinyl)thio]-, 2-[(4-methoxyphenyl)methylene]hydrazide (CA INDEX NAME)



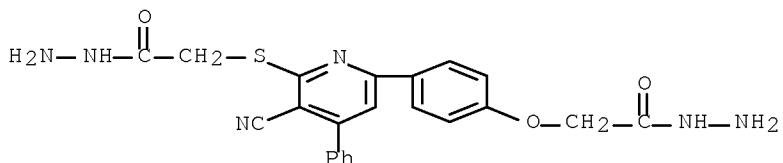
RN 157223-00-2 HCAPLUS  
 CN Acetic acid, 2-[(3-cyano-6-(4-hydroxyphenyl)-4-phenyl-2-pyridinyl)thio]-, 2-[(4-chlorophenyl)methylene]hydrazide (CA INDEX NAME)



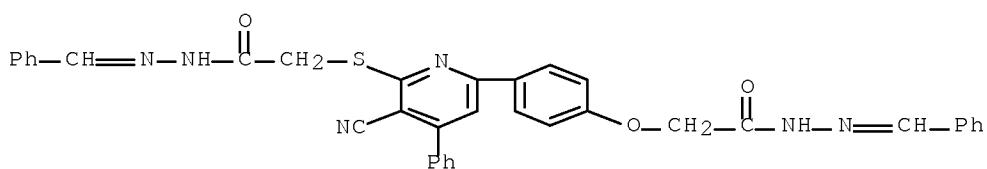
RN 157223-07-9 HCAPLUS  
 CN Acetic acid, [[3-cyano-6-[4-(2-ethoxy-2-oxoethoxy)phenyl]-4-phenyl-2-pyridinyl]thio]-, ethyl ester (9CI) (CA INDEX NAME)



RN 157223-08-0 HCAPLUS  
 CN Acetic acid, [[3-cyano-6-[4-(2-hydrazino-2-oxoethoxy)phenyl]-4-phenyl-2-pyridinyl]thio]-, hydrazide (9CI) (CA INDEX NAME)



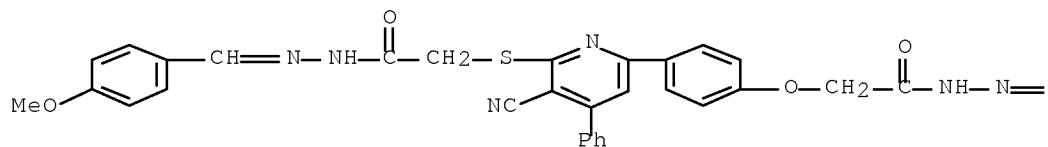
RN 157223-10-4 HCAPLUS  
 CN Acetic acid, [[3-cyano-6-[4-[2-oxo-2-[(phenylmethylene)hydrazino]ethoxy]phenyl]-4-phenyl-2-pyridinyl]thio]-, (phenylmethylene)hydrazide (9CI) (CA INDEX NAME)



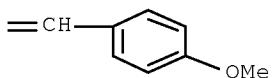
RN 157223-11-5 HCAPLUS  
 CN Acetic acid, [[2-cyano-6-[4-[2-[[4-methoxyphenyl)methylene]hydrazino]-2-oxoethoxy]phenyl]-4-phenyl-2-pyridinyl]thio]-, [(4-phenyl-2-oxo-2-[(phenylmethylene)hydrazino]ethoxy)phenyl]hydrazide (9CI) (CA INDEX NAME)

ethoxyphenyl)methylene]hydrazide (9CI) (CA INDEX NAME)

PAGE 1-A



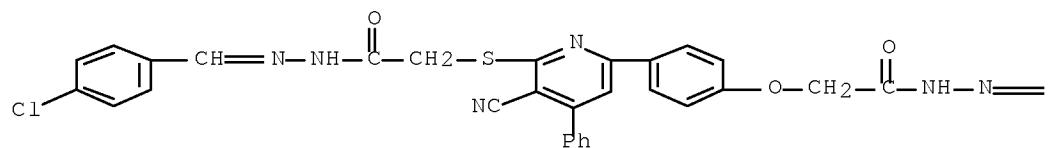
PAGE 1-B



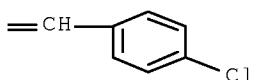
RN 157223-12-6 HCAPLUS

CN Acetic acid, [[6-[4-[2-[(4-chlorophenyl)methylene]hydrazino]-2-oxoethoxy]phenyl]-3-cyano-4-phenyl-2-pyridinyl]thio]-, [(4-chlorophenyl)methylene]hydrazide (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L57 ANSWER 34 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1995:273276 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 122:105015

ORIGINAL REFERENCE NO.: 122:19759a,19762a

TITLE: Crystal structure, spectroscopic study, molecular modeling, and *in vitro* antimicrobial

AUTHOR(S): activity testing of 2,2'-thiobis[4,6-diphenylpyridine-3-carbonitrile]  
 Victory, P.; Busquets, N.; Borrell, J. I.; Sanchez, I.; Teixido, J.; Serra, B.; Alvarez-Larena, A.; Piniella, J. F.; Guinea, J.; Garcia, J.

CORPORATE SOURCE: Dep. Quim. Org., Univ. Ramon Llull, Barcelona, E-08017, Spain

SOURCE: Journal of Chemical Crystallography (1994), 24(10), 675-9  
 CODEN: JCCYEV; ISSN: 1074-1542

PUBLISHER: Plenum

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 05 Jan 1995

AB X-ray anal. of the title compound showed that the mol. adopts a twisted conformation. AM1 and PM3 calcns. agreed with the crystal structure. Mass, IR, UV, and 1H and 13C NMR data were also reported. In vitro tests indicated an absence of antimicrobial activity.

CC 22-3 (Physical Organic Chemistry)  
 Section cross-reference(s): 75

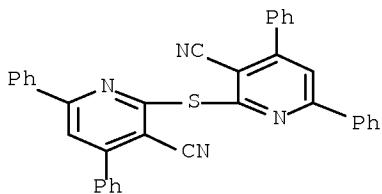
IT 160598-76-5P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation, spectra, modeling and x-ray anal. of)

IT 160598-76-5P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation, spectra, modeling and x-ray anal. of)

RN 160598-76-5 HCPLUS

CN 3-Pyridinecarbonitrile, 2,2'-thiobis[4,6-diphenyl-

(CA INDEX NAME)



L57 ANSWER 35 OF 51 HCPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1995:39653 HCPLUS Full-text  
 DOCUMENT NUMBER: 122:31630  
 ORIGINAL REFERENCE NO.: 122:6251a,6254a  
 TITLE: Regioselective synthesis of substituted thieno(selenopheno)[2,3-b]pyridines and pyrido[3',2':4,5]thieno(selenopheno)[3,2-d]pyrimidines based on 3-cyanopyridine-2(1H)-thiones, -selenones and N-cyanochloroacetamidine

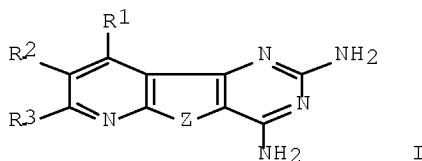
AUTHOR(S): Artemov, V. A.; Rodinovskaya, L. A.; Shestopalov, A. M.; Litvinov, V. P.

CORPORATE SOURCE: Inst. Org. Khim. im. Zelinskogo, Moscow, 117913, Russia

SOURCE: Khimiya Geterotsiklicheskih Soedinenii (1994), (1), 122-32  
 CODEN: KGSSAQ; ISSN: 0132-6244

DOCUMENT TYPE: Journal

LANGUAGE: Russian  
 OTHER SOURCE(S): CASREACT 122:31630  
 ED Entered STN: 08 Nov 1994  
 GI



AB 3-Cyanopyridine-2(1H)-thiones or -selenones undergo heteroannulation with N-cyanochloroacetamides to give thieno(selenopheno)[2,3-b]pyridines and 2,4-diaminopyrido[3',2':4,5]thieno(selenopheno)[3,2-d]pyrimidines (e.g., I; Z = S, Se; R1 = H, Me, Ph, 4-ClC<sub>6</sub>H<sub>4</sub>, 4-BrC<sub>6</sub>H<sub>4</sub>, CF<sub>3</sub>, 3-pyridyl; R2 = H, Me,; R3 = Me, Ph, 4-tolyl; R<sub>2</sub>R<sub>3</sub> = (CH<sub>2</sub>)<sub>4</sub>), which in turn were converted into compds. containing triazine, aminopyrimidine, and pyrimidinedione ring systems.

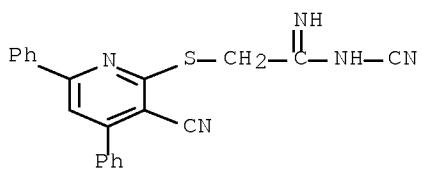
CC 29-8 (Organometallic and Organometalloidal Compounds)  
 Section cross-reference(s): 28

IT 154049-79-3P 154049-80-6P 154049-81-7P 159717-90-5P  
159717-91-6P 159717-92-7P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of substituted amino(aminocyaniminomethyl)thienopyridines)

IT 154049-79-3P 154049-80-6P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of substituted amino(aminocyaniminomethyl)thienopyridines)

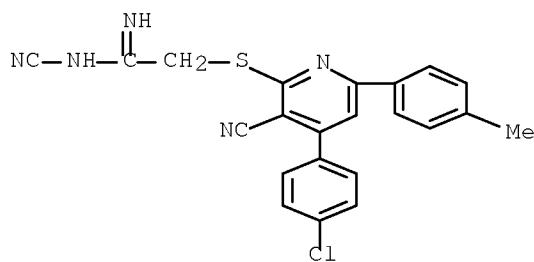
RN 154049-79-3 HCPLUS

CN Ethanimidamide, N-cyano-2-[ (3-cyano-4,6-diphenyl-2-pyridinyl)thio]- (CA INDEX NAME)



RN 154049-80-6 HCPLUS

CN Ethanimidamide, 2-[ (4-(4-chlorophenyl)-3-cyano-6-(4-methylphenyl)-2-pyridinyl]thio]-N-cyano- (CA INDEX NAME)



L57 ANSWER 36 OF 51 HCPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1996:6060 HCPLUS Full-text

DOCUMENT NUMBER: 124:176030

ORIGINAL REFERENCE NO.: 124:32643a,32646a

TITLE: Synthesis of some heterocycles related to pyridine

AUTHOR(S): Ahmed, Raga A.

CORPORATE SOURCE: Faculty of Science, Assiut University, Assiut, Egypt

SOURCE: Bulletin of the Faculty of Science, Assiut University,

B: Chemistry (1994), 23(2), 11-18

CODEN: BFSAE6; ISSN: 1010-2671

PUBLISHER: Assiut University

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 04 Jan 1996

AB Reaction of 3-cyano-4,6-diphenyl-2-pyridinethione with halo methylene compds. gave 4,6-diphenyl-2-[(diacyl)methyl]thio]-3-pyridinecarbonitriles. Cyclocondensation of the latter with hydrazine, hydroxylamine, urea and thiourea gave heterocyclic compds.

CC 28-20 (Heterocyclic Compounds (More Than One Hetero Atom))

IT 174074-02-3P 174074-03-4P 174074-04-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of [(heterocyclyl)thio]pyridinecarbonitriles)

IT 174074-05-6P 174074-06-7P 174074-07-8P

174074-08-9P 174074-09-0P 174074-10-3P 174074-11-4P

174074-12-5P 174074-13-6P 174074-14-7P

174074-15-8P 174074-16-9P 174074-17-0P

174074-18-1P 174074-19-2P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of [(heterocyclyl)thio]pyridinecarbonitriles)

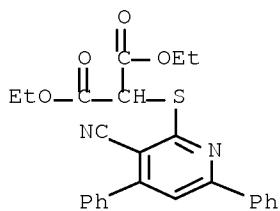
IT 174074-02-3P 174074-04-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

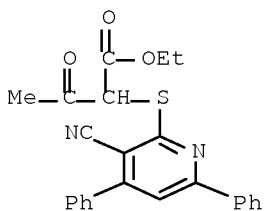
(preparation of [(heterocyclyl)thio]pyridinecarbonitriles)

RN 174074-02-3 HCPLUS

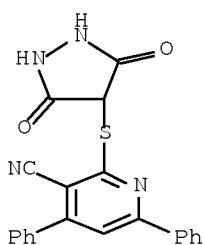
CN Propanedioic acid, 2-[(3-cyano-4,6-diphenyl-2-pyridinyl)thio]-, 1,3-diethyl ester (CA INDEX NAME)



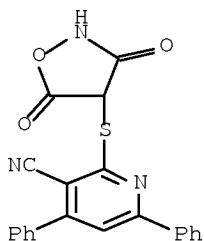
RN 174074-04-5 HCPLUS  
 CN Butanoic acid, 2-[(3-cyano-4,6-diphenyl-2-pyridinyl)thio]-3-oxo-, ethyl ester (CA INDEX NAME)



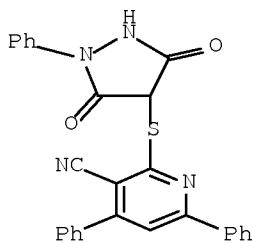
IT 174074-05-6P 174074-06-7P 174074-07-8P  
174074-10-3P 174074-12-5P 174074-14-7P  
174074-15-8P 174074-17-0P 174074-18-1P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of [(heterocyclyl)thio]pyridinecarbonitriles)  
 RN 174074-05-6 HCPLUS  
 CN 3-Pyridinecarbonitrile, 2-[(3,5-dioxo-4-pyrazolidinyl)thio]-4,6-diphenyl- (CA INDEX NAME)



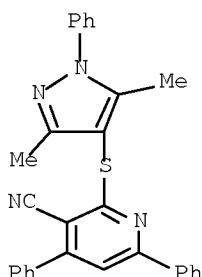
RN 174074-06-7 HCPLUS  
 CN 3-Pyridinecarbonitrile, 2-[(3,5-dioxo-4-isoxazolidinyl)thio]-4,6-diphenyl- (CA INDEX NAME)



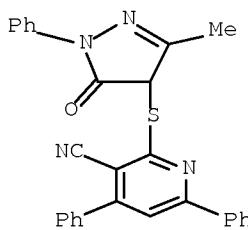
RN 174074-07-8 HCAPLUS  
 CN 3-Pyridinecarbonitrile, 2-[ (3,5-dioxo-1-phenyl-4-pyrazolidinyl)thio]-4,6-diphenyl- (CA INDEX NAME)



RN 174074-10-3 HCAPLUS  
 CN 3-Pyridinecarbonitrile, 2-[ (3,5-dimethyl-1-phenyl-1H-pyrazol-4-yl)thio]-4,6-diphenyl- (CA INDEX NAME)

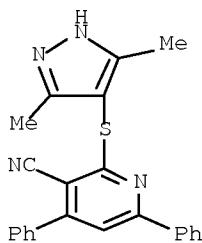


RN 174074-12-5 HCAPLUS  
 CN 3-Pyridinecarbonitrile, 2-[ (4,5-dihydro-3-methyl-5-oxo-1-phenyl-1H-pyrazol-4-yl)thio]-4,6-diphenyl- (CA INDEX NAME)



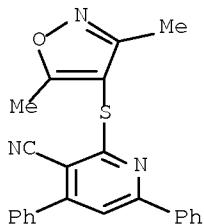
RN 174074-14-7 HCAPLUS

CN 3-Pyridinecarbonitrile, 2-[ (3,5-dimethyl-1H-pyrazol-4-yl)thio]-4,6-diphenyl- (CA INDEX NAME)



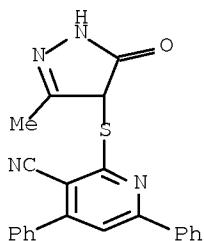
RN 174074-15-8 HCAPLUS

CN 3-Pyridinecarbonitrile, 2-[ (3,5-dimethyl-4-isoxazolyl)thio]-4,6-diphenyl- (CA INDEX NAME)

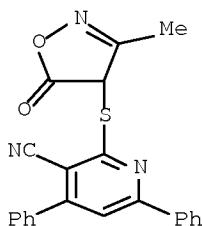


RN 174074-17-0 HCAPLUS

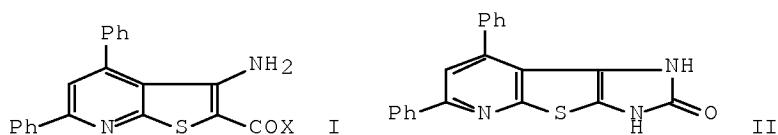
CN 3-Pyridinecarbonitrile, 2-[ (4,5-dihydro-3-methyl-5-oxo-1H-pyrazol-4-yl)thio]-4,6-diphenyl- (CA INDEX NAME)



RN 174074-18-1 HCAPLUS  
 CN 3-Pyridinecarbonitrile, 2-[ (4,5-dihydro-3-methyl-5-oxo-4-isoxazolyl)thio]-4,6-diphenyl- (CA INDEX NAME)



L57 ANSWER 37 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1994:217590 HCAPLUS [Full-text](#)  
 DOCUMENT NUMBER: 120:217590  
 ORIGINAL REFERENCE NO.: 120:38641a,38644a  
 TITLE: Synthesis and some reactions of thieno[2,3-d]pyrimidines and S-substituted mercaptopyridines  
 AUTHOR(S): Abdel Hafez, Ali A.; Ahmed, Raga A.; Geies, Ahmed A.; El-Kashef, Hussein S.  
 CORPORATE SOURCE: Fac. Sci., Assiut Univ., Assiut, Egypt  
 SOURCE: Collection of Czechoslovak Chemical Communications (1993), 58(8), 1931-6  
 CODEN: CCCCak; ISSN: 0010-0765  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 120:217590  
 ED Entered STN: 30 Apr 1994  
 GI



AB The title compds., hydrazides I [X = (arylmethyleneamino)amino], and analogs thereof, such as 4,6-diphenyl-1H-imidazo[4',5':4,5]thieno[2,3- b]pyridin-2(3H)-one (II), were prepared

CC 28-20 (Heterocyclic Compounds (More Than One Hetero Atom))

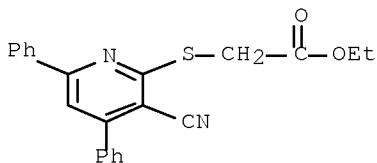
IT 94360-72-2 153705-69-2 153705-70-5 153705-71-6  
153705-72-7 153705-73-8 153705-74-9  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation as intermediate for thieno[2,3-d]pyrimidinecarboxylic acid hydrazide)

IT 153705-75-0P 153705-76-1P 153705-77-2P 153705-78-3P  
 153705-79-4P 153705-80-7P 153705-81-8P 153705-82-9P  
 153705-83-0P 153705-84-1P 153705-85-2P 153705-86-3P 153705-87-4P  
 153705-88-5P 153705-89-6P 153705-90-9P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)

IT 94360-72-2 153705-69-2 153705-71-6  
153705-72-7 153705-73-8  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation as intermediate for thieno[2,3-d]pyrimidinecarboxylic acid hydrazide)

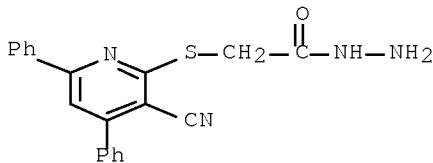
RN 94360-72-2 HCPLUS

CN Acetic acid, 2-[(3-cyano-4,6-diphenyl-2-pyridinyl)thio]-, ethyl ester (CA INDEX NAME)



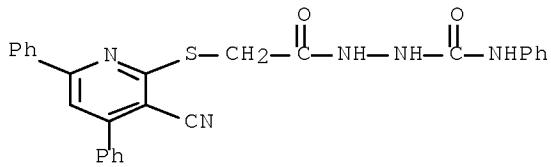
RN 153705-69-2 HCPLUS

CN Acetic acid, 2-[(3-cyano-4,6-diphenyl-2-pyridinyl)thio]-, hydrazide (CA INDEX NAME)



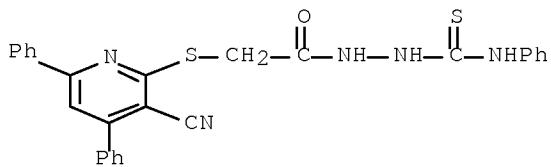
RN 153705-71-6 HCPLUS

CN Acetic acid, 2-[(3-cyano-4,6-diphenyl-2-pyridinyl)thio]-, 2-[(phenylamino)carbonyl]hydrazide (CA INDEX NAME)



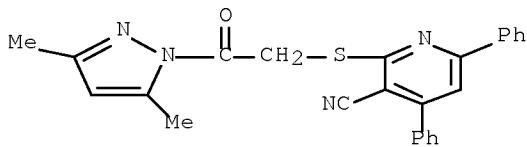
RN 153705-72-7 HCAPLUS

CN Acetic acid, 2-[(3-cyano-4,6-diphenyl-2-pyridinyl)thio]-, 2-[(phenylamino)thioxomethyl]hydrazide (CA INDEX NAME)



RN 153705-73-8 HCAPLUS

CN 3-Pyridinecarbonitrile, 2-[(2-(3,5-dimethyl-1H-pyrazol-1-yl)-2-oxoethyl]thio]-4,6-diphenyl- (CA INDEX NAME)



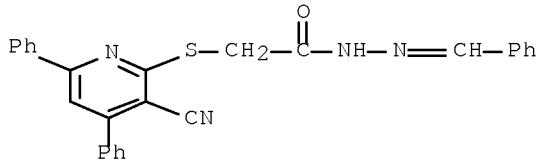
IT 153705-75-0P 153705-76-1P 153705-81-8P

153705-82-9P

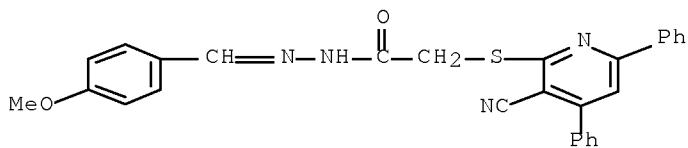
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 153705-75-0 HCAPLUS

CN Acetic acid, 2-[(3-cyano-4,6-diphenyl-2-pyridinyl)thio]-, 2-(phenylmethylene)hydrazide (CA INDEX NAME)

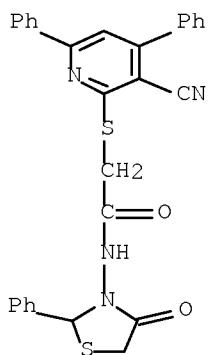


RN 153705-76-1 HCAPLUS

CN Acetic acid, 2-[ (3-cyano-4,6-diphenyl-2-pyridinyl)thio]-,  
2-[ (4-methoxyphenyl)methylene]hydrazide (CA INDEX NAME)

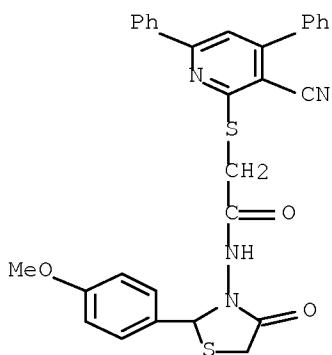
RN 153705-81-8 HCAPLUS

CN Acetamide, 2-[ (3-cyano-4,6-diphenyl-2-pyridinyl)thio]-N- (4-oxo-2-phenyl-3-thiazolidinyl)- (CA INDEX NAME)

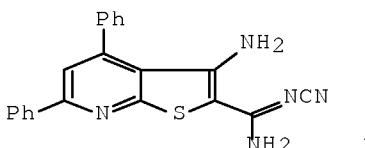


RN 153705-82-9 HCAPLUS

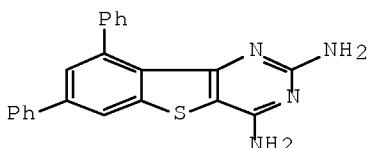
CN Acetamide, 2-[ (3-cyano-4,6-diphenyl-2-pyridinyl)thio]-N- [2-(4-methoxyphenyl)-4-oxo-3-thiazolidinyl]- (CA INDEX NAME)



ACCESSION NUMBER: 1994:244928 HCPLUS Full-text  
DOCUMENT NUMBER: 120:244928  
ORIGINAL REFERENCE NO.: 120:43417a, 43420a  
TITLE: Synthesis of 2,4-diaminopyrido[3',2':4,5]thieno[3,2-d]pyrimidines  
AUTHOR(S): Artyomov, Vasili A.; Rodinovskaya, Lyudmila A.;  
Shestopalov, Anatolii M.; Litvinov, Victor P.  
CORPORATE SOURCE: N. D. Zelinsky Inst. Org. Chem., Moscow, 117913,  
Russia  
SOURCE: Mendeleev Communications (1993), (4), 149-51  
CODEN: MENCEX; ISSN: 0959-9436  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 120:244928  
ED Entered STN: 14 May 1994  
GI



T



11

AB The heteroannulation reaction of 3-cyanopyridine-2(1H)-thiones with N-cyanochloroacetamidine leads consecutively to thieno[2,3-b]pyridines, e.g. I, and 2,4-diaminopyrido[3',2':4,5]thieno[3,2-d]pyrimidines, e.g. II.

CC 28-16 (Heterocyclic Compounds (More Than One Hetero Atom))

IT 154049-79-3P 154049-80-6P 154049-81-7P 154049-82-8P

154049-83-9P 154049-84-0P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and intramol cyclization of)

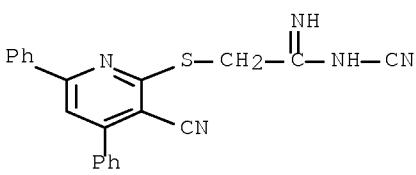
IT (preparation and intramol. cyclization of)  
154049-79-3P 154049-80-6P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)

(preparation and intramol. cyclization of)

RN 154049-79-3 HCPLUS  
CN Ethanimidamide, N-cyano-2-[{(3-cyano-4,6-diphenyl)-2-pyridinyl}thio]- (CA)

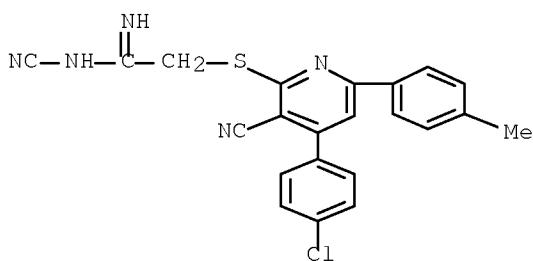
CN Ethenimimidamide, N-Cyano-2-[5-cyano-4,5-diphenyl-1-

INDEX NAME )



RN 154049-80-6 HCAPLUS

CN Ethanimidamide, 2-[(4-(4-chlorophenyl)-3-cyano-6-(4-methylphenyl)-2-pyridinyl]thio]-N-cyano- (CA INDEX NAME)



L57 ANSWER 39 OF 51 HCPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1993:38740 HCPLUS Full-text

DOCUMENT NUMBER: 118:38740

ORIGINAL REFERENCE NO.: 118:7055a, 7058a

TITLE: Synthesis of pyridine-2(1H)-thione and thieno[2,3-b]pyridine derivatives

AUTHOR(S): Elgemeie, Galal E. H.; Alnaimi, Ibrahim S.; Alarab, Hafsa F.

CORPORATE SOURCE: Fac. Sci., Qatar Univ., Doha, Qatar

SOURCE: Heterocycles (1992), 34(9), 1721-8

CODEN: HTCYAM; ISSN: 0385-5414

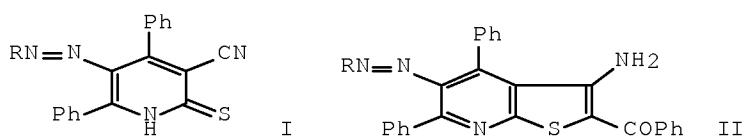
DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 118:38740

ED Entered STN: 03 Feb 1993

GI



AB Pyridinethiones I (R = substituted Ph) were prepared in 50–85% yields, by the cyclocondensation of cyanothioacetamide with 2-arylhydrazono-1,3-diphenylpropane-1,3-diones, (PhCO)<sub>2</sub>C:NHR in presence of EtONa. I reacted with phenacyl bromide to give 77–90% thieno[2,3-b]pyridines II.

CC 27-16 (Heterocyclic Compounds (One Hetero Atom))

IT 144881-56-1P 144881-59-4P 144881-61-8P 144881-62-9P 144881-64-1P  
 144881-65-2P 144881-66-3P 144881-67-4P 144881-68-5P 144881-69-6P  
144881-70-9P 144881-71-0P 144881-72-1P  
144881-73-2P 144881-74-3P

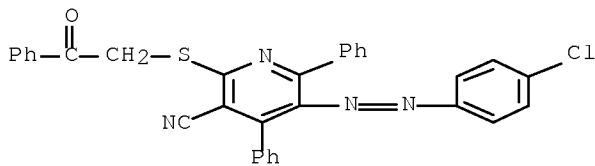
RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)

IT 144881-70-9P 144881-71-0P 144881-72-1P  
144881-73-2P 144881-74-3P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)

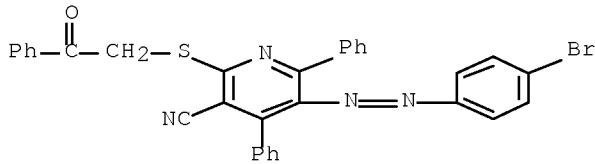
RN 144881-70-9 HCAPLUS

CN 3-Pyridinecarbonitrile, 5-[2-(4-chlorophenyl)diazenyl]-2-[ (2-oxo-2-phenylethyl)thio]-4,6-diphenyl- (CA INDEX NAME)



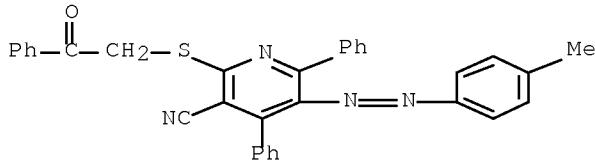
RN 144881-71-0 HCAPLUS

CN 3-Pyridinecarbonitrile, 5-[2-(4-bromophenyl)diazenyl]-2-[ (2-oxo-2-phenylethyl)thio]-4,6-diphenyl- (CA INDEX NAME)



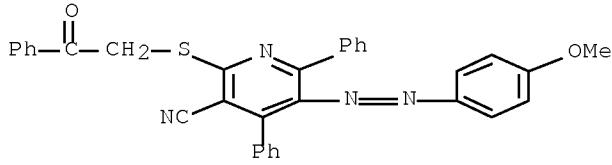
RN 144881-72-1 HCAPLUS

CN 3-Pyridinecarbonitrile, 5-[2-(4-methylphenyl)diazenyl]-2-[ (2-oxo-2-phenylethyl)thio]-4,6-diphenyl- (CA INDEX NAME)

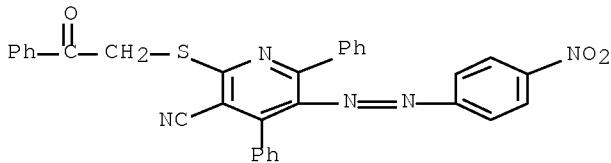


RN 144881-73-2 HCAPLUS

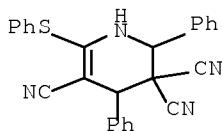
CN 3-Pyridinecarbonitrile, 5-[2-(4-methoxyphenyl)diazenyl]-2-[ (2-oxo-2-phenylethyl)thio]-4,6-diphenyl- (CA INDEX NAME)



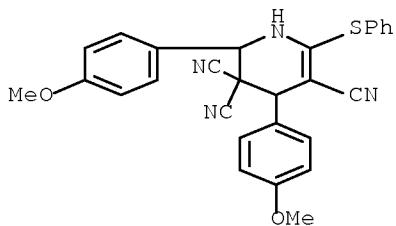
RN 144881-74-3 HCAPLUS  
 CN 3-Pyridinecarbonitrile, 5-[2-(4-nitrophenyl)diazenyl]-2-[(2-oxo-2-phenylethyl)thio]-4,6-diphenyl- (CA INDEX NAME)



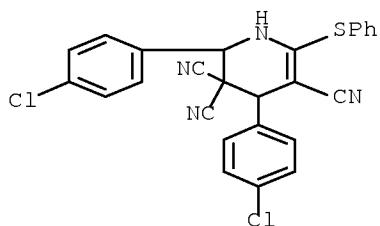
L57 ANSWER 40 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1992:426413 HCAPLUS Full-text  
 DOCUMENT NUMBER: 117:26413  
 ORIGINAL REFERENCE NO.: 117:4767a, 4770a  
 TITLE: Studies with polyfunctionally substituted heterocycles: synthesis of new pyridines, naphtho[1,2-b]pyrans, pyrazolo[3,4-b]pyridines and pyrazolo[1,5-a]pyrimidines  
 AUTHOR(S): Elnagdi, Mohamed Hilmy; Elghandour, Ahmed Hafiz Husein; Ibrahim, Mohamed Kamal Ahmed; Hafiz, Ibrahim Saad Abdel  
 CORPORATE SOURCE: Fac. Sci., Cairo Univ., Giza, Egypt  
 SOURCE: Zeitschrift fuer Naturforschung, B: Chemical Sciences (1992), 47(4), 572-8  
 CODEN: ZNBSN; ISSN: 0932-0776  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 ED Entered STN: 26 Jul 1992  
 AB A variety of new polyfunctionally substituted pyridines, naphthopyrans and pyrazolopyrimidines were prepared via reaction of ylidemalononitriles with thiophenol, thionaphthol, naphthols and aminopyrazoles.  
 CC 28-8 (Heterocyclic Compounds (More Than One Hetero Atom))  
 Section cross-reference(s): 27  
 IT 84186-26-5P 111161-22-9P 111161-23-0P 119825-06-8P 119825-07-9P  
 130944-10-4P 130944-12-6P 141987-58-8P 141987-59-9P  
141987-60-2P 141987-61-3P 141987-62-4P 141987-63-5P  
 141987-64-6P 141987-65-7P 141987-66-8P 141987-67-9P 141987-68-0P  
 141987-69-1P 141987-70-4P 141987-71-5P 141987-72-6P 141987-73-7P  
 141987-74-8P 141987-75-9P 141987-76-0P 141987-77-1P 141987-78-2P  
 141987-79-3P 141987-80-6P 141987-81-7P 141987-82-8P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (preparation and spectra of)  
 IT 141987-58-8P 141987-59-9P 141987-60-2P  
141987-61-3P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (preparation and spectra of)  
 RN 141987-58-8 HCAPLUS  
 CN 3,3,5(2H)-Pyridinetricarbonitrile, 1,4-dihydro-2,4-diphenyl-6-(phenylthio)- (CA INDEX NAME)



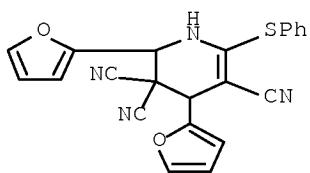
RN 141987-59-9 HCAPLUS  
 CN 3,3,5(2H)-Pyridinetricarbonitrile, 1,4-dihydro-2,4-bis(4-methoxyphenyl)-6-(phenylthio)- (CA INDEX NAME)



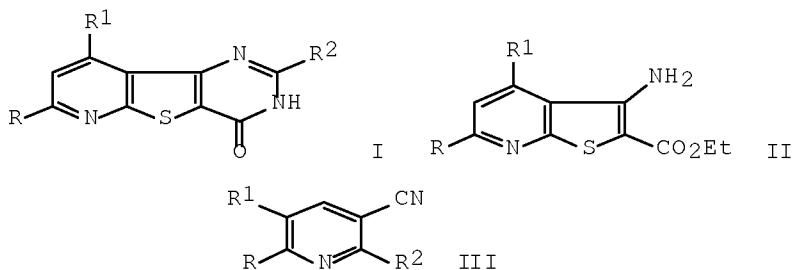
RN 141987-60-2 HCAPLUS  
 CN 3,3,5(2H)-Pyridinetricarbonitrile, 2,4-bis(4-chlorophenyl)-1,4-dihydro-6-(phenylthio)- (CA INDEX NAME)



RN 141987-61-3 HCAPLUS  
 CN 3,3,5(2H)-Pyridinetricarbonitrile, 2,4-di-2-furanyl-1,4-dihydro-6-(phenylthio)- (CA INDEX NAME)



L57 ANSWER 41 OF 51 HCPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1992:591805 HCPLUS Full-text  
 DOCUMENT NUMBER: 117:191805  
 ORIGINAL REFERENCE NO.: 117:33131a,33134a  
 TITLE: Synthesis and reactions of 2-carbethoxy-3-aminothieno[2,3-b]pyridines  
 AUTHOR(S): Dave, Chaitanya G.; Shah, P. R.; Shah, A. B.  
 CORPORATE SOURCE: Dep. Chem., St Xavier's Coll., Ahmedabad, 380 009,  
 India  
 SOURCE: Indian Journal of Chemistry, Section B: Organic  
 Chemistry Including Medicinal Chemistry (1992  
 ), 31B(8), 492-4  
 CODEN: IJSBDB; ISSN: 0376-4699  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 117:191805  
 ED Entered STN: 15 Nov 1992  
 GI



AB Several pyridothienopyrimidinones I (R, R1 = Ph, substituted Ph; R2 = H, Me) have been synthesized from novel 2-carbethoxy-3-aminothieno[2,3-b]pyridines II. 2-Carbethoxymethylmercapto-3-cyanopyridines III (R, R1 as above; R2 = SCH<sub>2</sub>CO<sub>2</sub>Et) have been isolated from the reactions between 2-chloro-3-cyanopyridines III (R2 = Cl) and HSCH<sub>2</sub>CO<sub>2</sub>Et during the synthesis of II. The structures of the compds. have been established on the basis of elemental anal. and spectral data.

CC 28-16 (Heterocyclic Compounds (More Than One Hetero Atom))

IT 94360-72-2P 94360-74-4P 94360-76-6P

143882-80-8P 143882-81-9P 143882-82-0P

143882-83-1P 143882-84-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and intramol. cyclization of, in presence of base)

IT 94360-72-2P 94360-74-4P 94360-76-6P

143882-80-8P 143882-81-9P 143882-82-0P

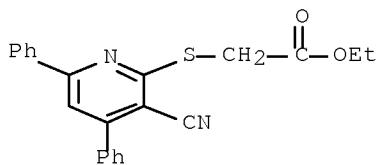
143882-83-1P 143882-84-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

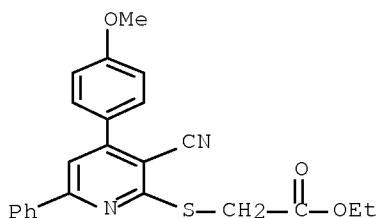
(preparation and intramol. cyclization of, in presence of base)

RN 94360-72-2 HCPLUS

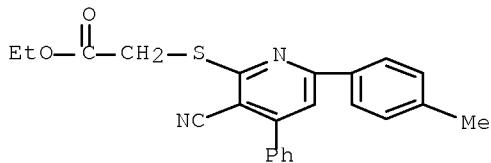
CN Acetic acid, 2-[(3-cyano-4,6-diphenyl-2-pyridinyl)thio]-, ethyl ester (CA INDEX NAME)



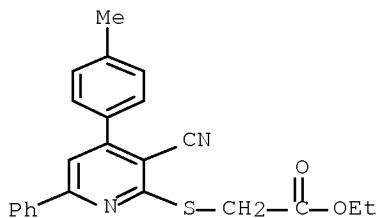
RN 94360-74-4 HCAPLUS  
 CN Acetic acid, 2-[3-cyano-4-(4-methoxyphenyl)-6-phenyl-2-pyridinyl]thio]-, ethyl ester (CA INDEX NAME)



RN 94360-76-6 HCAPLUS  
 CN Acetic acid, [3-cyano-6-(4-methylphenyl)-4-phenyl-2-pyridinyl]thio]-, ethyl ester (9CI) (CA INDEX NAME)

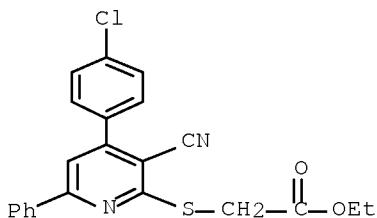


RN 143882-80-8 HCAPLUS  
 CN Acetic acid, 2-[3-cyano-4-(4-methylphenyl)-6-phenyl-2-pyridinyl]thio]-, ethyl ester (CA INDEX NAME)



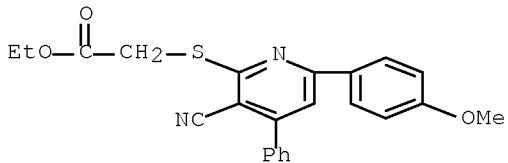
RN 143882-81-9 HCAPLUS

CN Acetic acid, 2-[ [4-(4-chlorophenyl)-3-cyano-6-phenyl-2-pyridinyl]thio]-, ethyl ester (CA INDEX NAME)



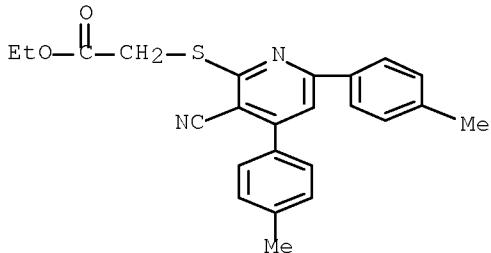
RN 143882-82-0 HCAPLUS

CN Acetic acid, 2-[ [3-cyano-6-(4-methoxyphenyl)-4-phenyl-2-pyridinyl]thio]-, ethyl ester (CA INDEX NAME)



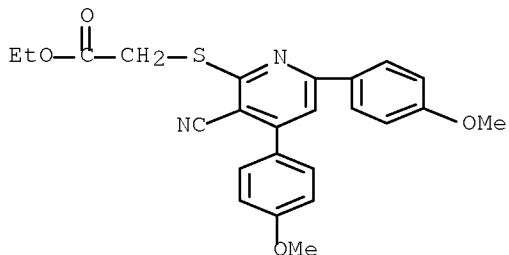
RN 143882-83-1 HCAPLUS

CN Acetic acid, 2-[ [3-cyano-4,6-bis(4-methylphenyl)-2-pyridinyl]thio]-, ethyl ester (CA INDEX NAME)



RN 143882-84-2 HCAPLUS

CN Acetic acid, 2-[ [3-cyano-4,6-bis(4-methoxyphenyl)-2-pyridinyl]thio]-, ethyl ester (CA INDEX NAME)



L57 ANSWER 42 OF 51 HCPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1993:38791 HCPLUS Full-text

DOCUMENT NUMBER: 118:38791

ORIGINAL REFERENCE NO.: 118:7067a, 7070a

TITLE: Synthesis, properties, and cardiotonic activity of 2-carbamoylmethylthio-6-phenyl-5-ethoxycarbonyl-3-cyclo-4-(pyrido-3'yl)pyridine derivatives and their hydrogenated analogs

AUTHOR(S): Krauze, A.; Garalene, V.; Duburs, G.

CORPORATE SOURCE: Inst. Org. Synth., Riga, Latvia

SOURCE: Khimiko-Farmatsevticheskii Zhurnal (1992), 26(5), 40-3

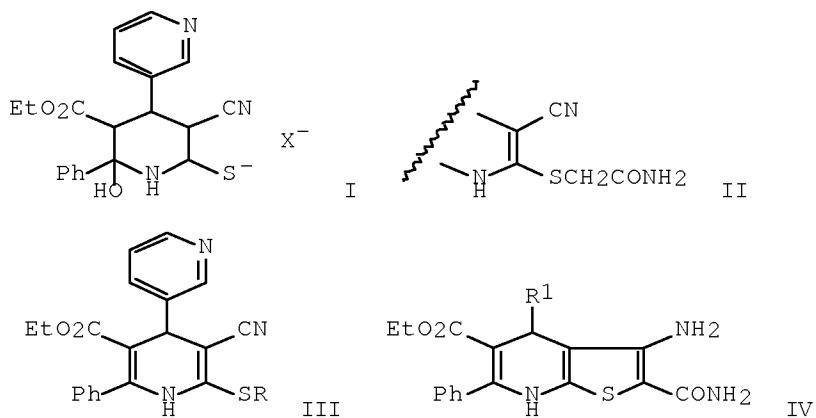
CODEN: KHFZAN; ISSN: 0023-1134

DOCUMENT TYPE: Journal

LANGUAGE: Russian

ED Entered STN: 03 Feb 1993

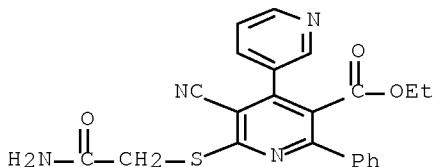
GI



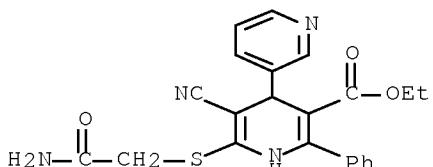
AB Cyclocondensation of PhCOCH<sub>2</sub>CO<sub>2</sub>Et with 2-cyano-3-pyridinethioacrylamide in the presence of bases gave pyridinecarboxylates I (X<sup>+</sup> = piperidino, Na) which when treated with ICH<sub>2</sub>CONH<sub>2</sub> gave 82% amide II; betaine III (R = H) similarly treated gave amide III (R = CH<sub>2</sub>CONH<sub>2</sub>) which underwent base-catalyzed cyclization to give thienopyridine IV (R<sup>1</sup> = 3-pyridyl). Addnl. obtained was IV

(R1 = Ph). The 4,3'-bipyridines show dual activity-neg. inotropic action at low concns. and pos. inotropic activity at concns. >10-5M.

CC 28-2 (Heterocyclic Compounds (More Than One Hetero Atom))  
 Section cross-reference(s): 1  
 IT 144969-93-7P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation, cyclization, and cardiotonic properties of)  
 IT 144969-91-5P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation, ionic hydrogenation, and base-catalyzed cyclization of)  
 IT 144969-93-7P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation, cyclization, and cardiotonic properties of)  
 RN 144969-93-7 HCPLUS  
 CN [3,4'-Bipyridine]-3'-carboxylic acid, 6'-[{(2-amino-2-oxoethyl)thio]-5'-cyano-2'-phenyl-, ethyl ester (CA INDEX NAME)

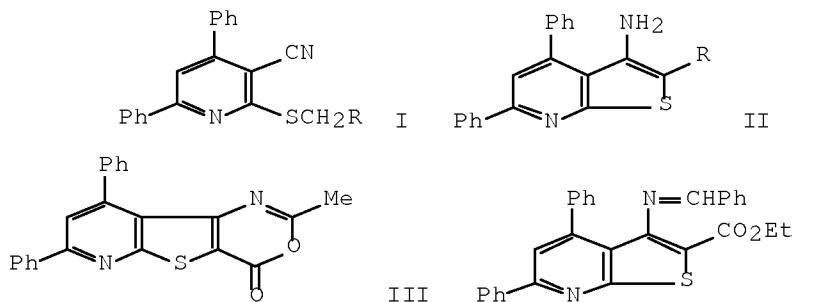


IT 144969-91-5P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation, ionic hydrogenation, and base-catalyzed cyclization of)  
 RN 144969-91-5 HCPLUS  
 CN [3,4'-Bipyridine]-3'-carboxylic acid, 6'-[{(2-amino-2-oxoethyl)thio]-5'-cyano-1',4'-dihydro-2'-phenyl-, ethyl ester (CA INDEX NAME)



L57 ANSWER 43 OF 51 HCPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1993:147516 HCPLUS Full-text  
 DOCUMENT NUMBER: 118:147516  
 ORIGINAL REFERENCE NO.: 118:25371a,25374a  
 TITLE: Pyridine derivatives and related compounds. Some reactions with 3-cyano-4,6-diphenyl-2-mercaptopypyridine  
 AUTHOR(S): Deeb, A.; Essawy, A.; El-Gendy, A. M.; Shaban, A. M.  
 CORPORATE SOURCE: Fac. Sci., Zagazig Univ., Zagazig, Egypt

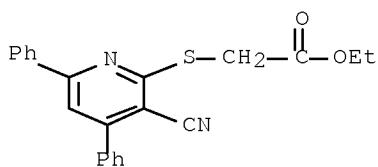
SOURCE: Egyptian Journal of Chemistry (1991), Volume Date 1990, 33(2), 215-20  
 CODEN: EGJCA3; ISSN: 0367-0422  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 ED Entered STN: 13 Apr 1993  
 GI



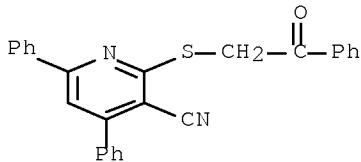
AB The title compound reacted with XCH<sub>2</sub>R (R = CO<sub>2</sub>H, X = Cl; R = CO<sub>2</sub>Et, X = Br; R = COPh, X = Br) to give (methylthio)pyridines I. I underwent intramol. cyclization to give thienopyridines II. II (R = CO<sub>2</sub>H) was N-acetylated and cyclized to give pyridothenooxazinone III. II (R = CO<sub>2</sub>Et) condensed with PhCHO to give the corresponding imine IV.

CC 28-13 (Heterocyclic Compounds (More Than One Hetero Atom))  
 IT 94360-72-2P 94360-86-8P 94361-03-2P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and intramol. cyclization of, thienylpyridine from)  
 IT 94360-72-2P 94360-86-8P 94361-03-2P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and intramol. cyclization of, thienylpyridine from)

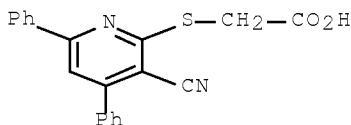
RN 94360-72-2 HCPLUS  
 CN Acetic acid, 2-[(3-cyano-4,6-diphenyl-2-pyridinyl)thio]-, ethyl ester (CA INDEX NAME)



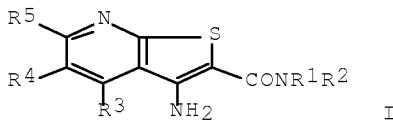
RN 94360-86-8 HCPLUS  
 CN 3-Pyridinecarbonitrile, 2-[(2-oxo-2-phenylethyl)thio]-4,6-diphenyl- (CA INDEX NAME)



RN 94361-03-2 HCAPLUS  
 CN Acetic acid, 2-[3-cyano-4,6-diphenyl-2-pyridinyl]thio]- (CA INDEX NAME)



L57 ANSWER 44 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1990:515227 HCAPLUS Full-text  
 DOCUMENT NUMBER: 113:115227  
 ORIGINAL REFERENCE NO.: 113:19527a,19530a  
 TITLE: Polycyclic pyridines. Part 8. Synthesis of new primary, secondary and tertiary 3-aminothieno[2,3-b]pyridine-2-carboxamides by different pathways  
 AUTHOR(S): Wagner, G.; Vieweg, H.; Leistner, S.; Boehm, N.; Krasselt, U.; Hanfeld, Vera; Prantz, J.; Grupe, Renate  
 CORPORATE SOURCE: Sekt. Biowiss., Karl-Marx-Univ., Leipzig, DDR-7010, Ger. Dem. Rep.  
 SOURCE: Pharmazie (1990), 45(2), 102-9  
 CODEN: PHARAT; ISSN: 0031-7144  
 DOCUMENT TYPE: Journal  
 LANGUAGE: German  
 OTHER SOURCE(S): CASREACT 113:115227  
 ED Entered STN: 29 Sep 1990  
 GI



AB The treatment of 2-thioxo-1,2-dihydropyridine-3-carbonitriles with C1CH2CO2NR1R3 (R1, R2 = H, Me, Et) gave 3-aminothieno[2,3-b]pyridinecarboxylic acid amides I [R1 = H, Et, Me; R2 = H, Et, Bu, cyclohexyl, CH2CH2OH, CH2CO2H; R1R2 = (CH2)5; R3 = Me, Ph, 4-BrC6H4, 3-pyridyl, CONH2, etc; R4 = H, Me, CH2C6H4(CN)-4; R5 = Me, C6H4Cl-4, Ph, C6H4Br-4, furyl, naphthyl, OH]. Some of the compds. thus prepared, e.g. I (R1 = R2 = R4 = H, R3 = Me, R5 = Ph) and I (R1 = R4 = H, R2 = CH2CH2OH, R3 = R5 = Me)

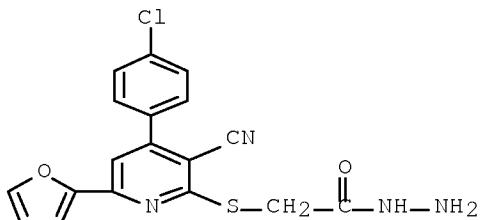
showed activity as antiallergics in the passive cutaneous anaphylaxis test in rats.

CC 28-16 (Heterocyclic Compounds (More Than One Hetero Atom))  
 Section cross-reference(s): 1  
 IT 128917-90-8P 128917-91-9P 128917-92-0P  
128917-93-1P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and condensation reaction of, with hydrazine)

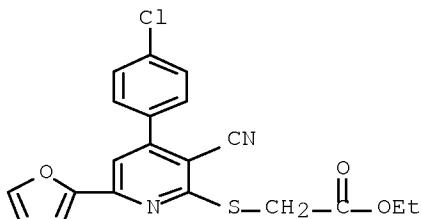
IT 128917-90-8P 128917-91-9P 128917-92-0P  
128917-93-1P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and condensation reaction of, with hydrazine)

RN 128917-90-8 HCPLUS

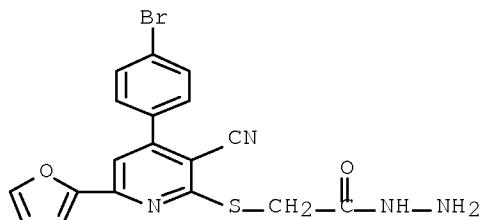
CN Acetic acid, 2-[[4-(4-chlorophenyl)-3-cyano-6-(2-furanyl)-2-pyridinyl]thio]-, hydrazide (CA INDEX NAME)



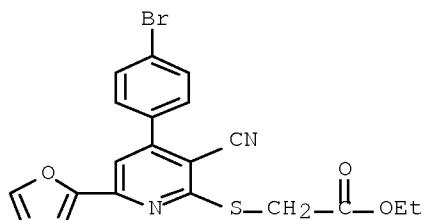
RN 128917-91-9 HCPLUS  
 CN Acetic acid, 2-[[4-(4-chlorophenyl)-3-cyano-6-(2-furanyl)-2-pyridinyl]thio]-, ethyl ester (CA INDEX NAME)



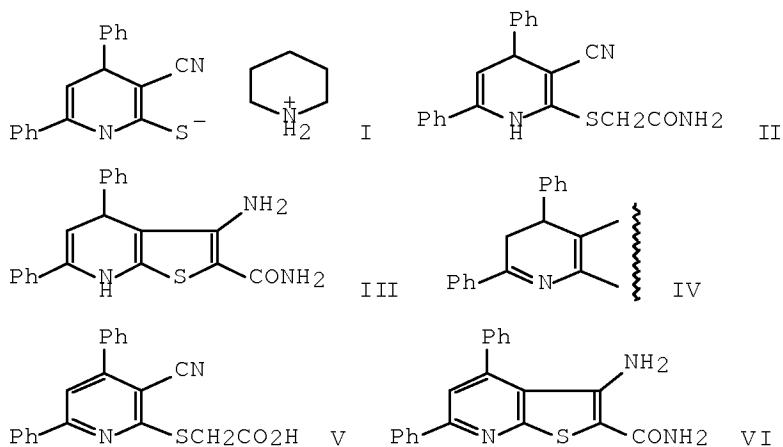
RN 128917-92-0 HCPLUS  
 CN Acetic acid, 2-[[4-(4-bromophenyl)-3-cyano-6-(2-furanyl)-2-pyridinyl]thio]-, hydrazide (CA INDEX NAME)



RN 128917-93-1 HCAPLUS  
 CN Acetic acid, 2-[4-(4-bromophenyl)-3-cyano-6-(2-furanyl)-2-pyridinyl]thioethyl ester (CA INDEX NAME)



L57 ANSWER 45 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1988:55915 HCAPLUS Full-text  
 DOCUMENT NUMBER: 108:55915  
 ORIGINAL REFERENCE NO.: 108:9337a,9340a  
 TITLE: 3-Amino-2-carbamoyl-4,6-diphenyl-4,5- and  
         4,7-dihydrothieno[2,3-b]pyridines  
 AUTHOR(S): Krauze, A.; Liepins, E.; Dubur, G.  
 CORPORATE SOURCE: Inst. Org. Sint., Riga, 226006, USSR  
 SOURCE: Khimiya Geterotsiklichesikh Soedinenii (1987  
         ), (4), 563-4  
 CODEN: KGSSAQ; ISSN: 0453-8234  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 OTHER SOURCE(S): CASREACT 108:55915  
 ED Entered STN: 20 Feb 1988  
 GI



AB Alkylation of salt I by ICH<sub>2</sub>CONH<sub>2</sub> gave 79% pyridine II which was heated with base at 50-60° to give thienopyridines III and 83% IV. Oxidation of II gave pyridine V which was cyclized by NaOH to give thienopyridine VI.

CC 28-2 (Heterocyclic Compounds (More Than One Hetero Atom))

IT 94360-67-5P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation and cyclization by sodium hydroxide)

IT 112475-75-9P

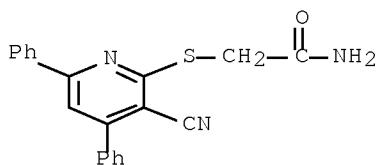
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation, oxidation, and cyclization by base)

IT 94360-67-5P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation and cyclization by sodium hydroxide)

RN 94360-67-5 HCPLUS

CN Acetamide, 2-[(3-cyano-4,6-diphenyl-2-pyridinyl)thio]- (CA INDEX NAME)

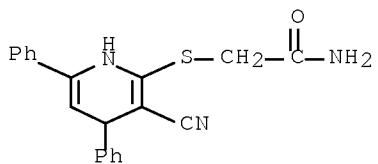


IT 112475-75-9P

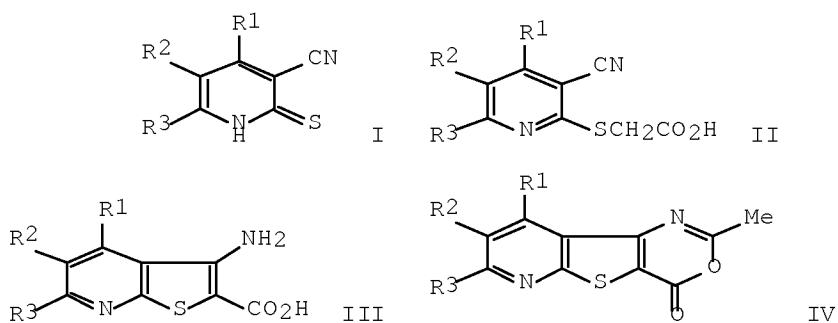
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation, oxidation, and cyclization by base)

RN 112475-75-9 HCPLUS

CN Acetamide, 2-[(3-cyano-1,4-dihydro-4,6-diphenyl-2-pyridinyl)thio]- (CA INDEX NAME)



L57 ANSWER 46 OF 51 HCPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1985:95563 HCPLUS Full-text  
 DOCUMENT NUMBER: 102:95563  
 ORIGINAL REFERENCE NO.: 102:15029a,15032a  
 TITLE: Cyclization of nitriles. XI. Synthesis and reactions  
 of 3-amino-2-carboxythieno[2,3-b]pyridines  
 Shestopalov, A. M.; Sharanin, Yu. A.  
 CORPORATE SOURCE: Voroshilovgrad. Gos. Pedagog. Inst., Voroshilovgrad,  
 USSR  
 SOURCE: Zhurnal Organicheskoi Khimii (1984), 20(9),  
 1991-2002  
 CODEN: ZORKAE; ISSN: 0514-7492  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 OTHER SOURCE(S): CASREACT 102:95563  
 ED Entered STN: 22 Mar 1985  
 GI



AB Treating 3-cyano-2(1H)-pyridinethiones I [R1 = Ph, halosubstituted Ph, R2 = H, R3 = Ph; R1 = Ph, 4-ClC6H4, 4-BrC6H4, 2-furyl, R2R3 = (CH2)4; R1 = 2-FC6H4, Ph, R2 = H, R3 = Ph, 4-MeC6H4, 4-MeOC6H4; R1 = 2-furyl, R2 = Me, R3 = H] with BrCH2CO2H gave 55-98% thioacetic acid derivs. II which underwent the Torpa-Ziegler reaction to give 79-98% thienopyridines III. The latter III [R1 = Ph, 4-FC6H4, 4-ClC6H4, R2 = H, R3 = Ph; R1 = Ph, 2-furyl, R2R3 = (CH2)4] cyclocondensed with Ac2O gave oxazines IV.

CC 28-2 (Heterocyclic Compounds (More Than One Hetero Atom))

IT 58327-77-8P 94361-03-2P 94639-83-5P 94639-86-8P  
 94639-89-1P 94640-05-8P 94640-06-9P  
 94640-07-0P 94640-08-1P 94640-09-2P  
 94640-10-5P 94640-11-6P 94640-12-7P 94640-13-8P 94655-71-7P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(Reactant or reagent)  
 (preparation and cyclization of)

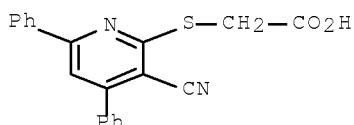
IT 94360-67-5P 94639-68-6P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation and intramol. cyclocondensation of)

IT 58327-96-1P 94639-61-9P 94639-62-0P 94639-63-1P 94639-64-2P  
 94639-65-3P 94639-66-4P 94639-69-7P 94639-70-0P 94639-79-9P  
94639-80-2P 94639-81-3P 94639-82-4P 94639-84-6P  
 94639-85-7P 94639-87-9P 94639-88-0P 94639-94-8P 94639-95-9P  
 94639-96-0P 94639-97-1P 94639-98-2P 94639-99-3P 94640-00-3P  
 94640-01-4P 94640-14-9P 94655-72-8P 94655-73-9P  
 94655-74-0P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)

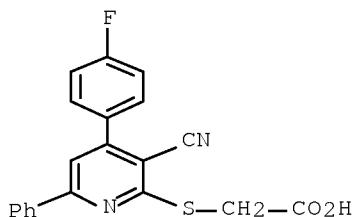
IT 94361-03-2P 94640-05-8P 94640-06-9P  
94640-07-0P 94640-08-1P 94640-09-2P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation and cyclization of)

RN 94361-03-2 HCPLUS

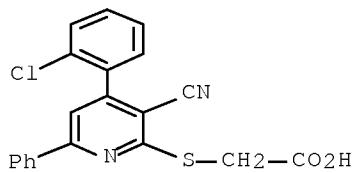
CN Acetic acid, 2-[(3-cyano-4,6-diphenyl-2-pyridinyl)thio]- (CA INDEX NAME)



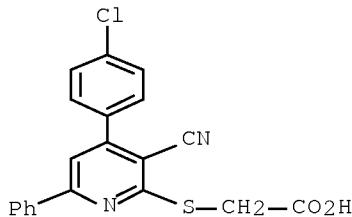
RN 94640-05-8 HCPLUS  
 CN Acetic acid, [(3-cyano-4-(4-fluorophenyl)-6-phenyl-2-pyridinyl)thio]- (9CI) (CA INDEX NAME)



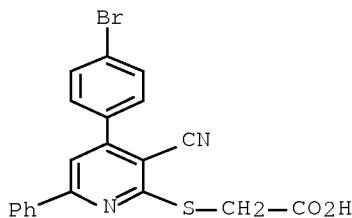
RN 94640-06-9 HCPLUS  
 CN Acetic acid, [(4-(2-chlorophenyl)-3-cyano-6-phenyl-2-pyridinyl)thio]- (9CI) (CA INDEX NAME)



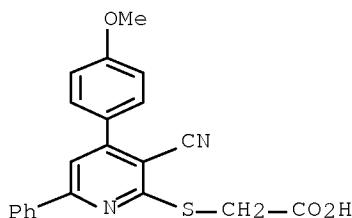
RN 94640-07-0 HCPLUS  
 CN Acetic acid, 2-[4-(4-chlorophenyl)-3-cyano-6-phenyl-2-pyridinyl]thio]-  
 (CA INDEX NAME)



RN 94640-08-1 HCPLUS  
 CN Acetic acid, [4-(4-bromophenyl)-3-cyano-6-phenyl-2-pyridinyl]thio]- (9CI)  
 (CA INDEX NAME)



RN 94640-09-2 HCPLUS  
 CN Acetic acid, [[3-cyano-4-(4-methoxyphenyl)-6-phenyl-2-pyridinyl]thio]-  
 (9CI) (CA INDEX NAME)

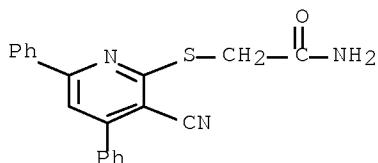


IT 94360-67-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and intramol. cyclocondensation of)

RN 94360-67-5 HCPLUS

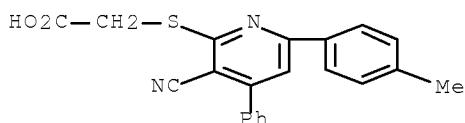
CN Acetamide, 2-[(3-cyano-4,6-diphenyl-2-pyridinyl)thio]- (CA INDEX NAME)

IT 94639-79-9P 94639-80-2P 94640-14-9P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)

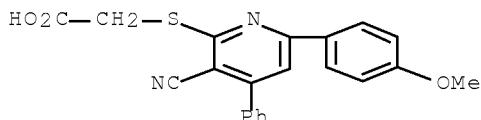
RN 94639-79-9 HCPLUS

CN Acetic acid, [[3-cyano-6-(4-methylphenyl)-4-phenyl-2-pyridinyl]thio]- (9CI) (CA INDEX NAME)



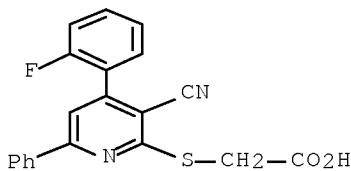
RN 94639-80-2 HCPLUS

CN Acetic acid, [[3-cyano-6-(4-methoxyphenyl)-4-phenyl-2-pyridinyl]thio]- (9CI) (CA INDEX NAME)



RN 94640-14-9 HCPLUS

CN Acetic acid, [[3-cyano-4-(2-fluorophenyl)-6-phenyl-2-pyridinyl]thio]- (9CI) (CA INDEX NAME)



L57 ANSWER 47 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1985:62106 HCAPLUS Full-text

DOCUMENT NUMBER: 102:62106

ORIGINAL REFERENCE NO.: 102:9741a, 9744a

TITLE: Cyclization of nitriles. XI. Syntheses from 2-aryl-3-aryloxy-1,1-dicyanopropanes

AUTHOR(S): Shestopalov, A. M.; Promonenkov, V. K.; Sharanin, Yu. A.; Rodinovskaya, L. A.; Sharanin, S. Yu.

CORPORATE SOURCE: Voroshilovgrad. Gos. Pedagog. Inst., Voroshilovgrad, USSR

SOURCE: Zhurnal Organicheskoi Khimii (1984), 20(7), 1517-38

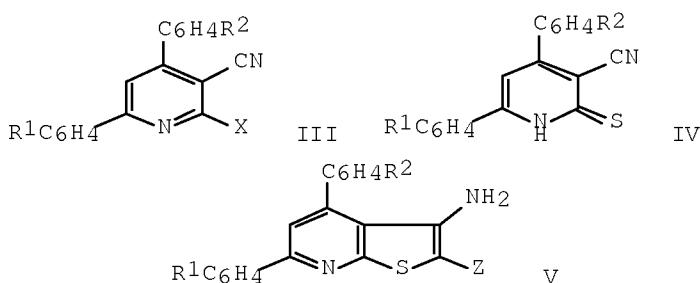
CODEN: ZORKAE; ISSN: 0514-7492

DOCUMENT TYPE: Journal

LANGUAGE: Russian

ED Entered STN: 24 Feb 1985

GI



AB R1C<sub>6</sub>H<sub>4</sub>COCH(C<sub>6</sub>H<sub>4</sub>R<sub>2</sub>)CH(CN)<sub>2</sub> (I; R<sub>1</sub> = H, 4-F, 4-MeO, 4-Me, 4-Br, 4-Cl; R<sub>2</sub> = H, 2-F, 2-, 4-Cl, 2-, 4-MeO, 3-, 4-Br) and R1C<sub>6</sub>H<sub>4</sub>COCH<sub>2</sub>CH(C<sub>6</sub>H<sub>4</sub>R<sub>2</sub>)CBr(CN)<sub>2</sub> (II) were prepared from chalcones and CH<sub>2</sub>(CN)<sub>2</sub> and converted to the corresponding 3-cyanopyridines III and 3-cyano-2(1H)-pyridinethiones IV. Treating the latter with ZCH<sub>2</sub>X (Z = CN, Bz, substituted Bz, CO<sub>2</sub>Et, CO<sub>2</sub>Me, CONH<sub>2</sub>; X = Cl, Br) gives S-phenacyl, etc. derivs. which are easily cyclized to thienopyridines V. 2-Bromo-3-cyanopyridines also undergo nucleophilic substitution with alcs., amines, iodine, cyanides, and rhodamine.

CC 28-2 (Heterocyclic Compounds (More Than One Hetero Atom))  
Section cross-reference(s): 27

IT 78564-27-9P 78564-30-4P 78615-26-6P 94360-66-4P  
94360-67-5P 94360-68-6P 94360-69-7P  
94360-72-2P 94360-73-3P 94360-74-4P  
94360-75-5P 94360-76-6P 94360-77-7P  
94360-78-8P 94360-86-8P 94360-87-9P

94360-88-0P 94360-89-1P 94360-90-4P  
94360-91-5P 94360-92-6P 94360-93-7P  
94360-94-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)

(preparation and cyclization of)

IT	58327-70-1P	58327-73-4P	58327-77-8P	60847-65-6P	60847-68-9P
	61006-40-4P	78564-37-1P	94360-17-5P	94360-21-1P	94360-22-2P
	94360-23-3P	94360-25-5P	94360-26-6P	94360-27-7P	94360-28-8P
	94360-29-9P	94360-30-2P	94360-32-4P	94360-35-7P	94360-36-8P
	94360-37-9P	94360-38-0P	94360-39-1P	94360-40-4P	94360-41-5P
	94360-42-6P	94360-43-7P	94360-44-8P	94360-45-9P	94360-46-0P
	94360-47-1P	94360-48-2P	94360-49-3P	94360-50-6P	94360-51-7P
	94360-52-8P	94360-53-9P	94360-54-0P	94360-55-1P	94360-56-2P
	94360-57-3P	94360-58-4P	94360-59-5P	94360-60-8P	94360-61-9P
	94360-62-0P	94360-70-0P	94360-71-1P	94360-79-9P	94360-80-2P
	94360-81-3P	94360-82-4P	94360-83-5P	94360-84-6P	94360-85-7P
	94360-95-9P	94360-96-0P	94360-97-1P	94360-98-2P	94360-99-3P
	94361-00-9P	94361-01-0P	94361-02-1P	<u>94361-03-2P</u>	

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)

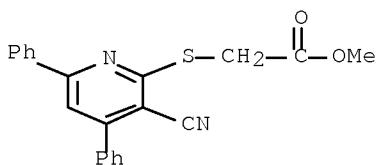
IT	78564-30-4P	94360-67-5P	94360-68-6P
	94360-69-7P	94360-72-2P	94360-73-3P
	94360-74-4P	94360-75-5P	94360-76-6P
	94360-77-7P	94360-78-8P	94360-86-8P
	94360-87-9P	94360-88-0P	94360-89-1P
	94360-90-4P	94360-91-5P	94360-92-6P
	94360-93-7P	94360-94-8P	

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)

(preparation and cyclization of)

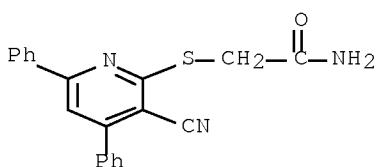
RN 78564-30-4 HCPLUS

CN Acetic acid, [(3-cyano-4,6-diphenyl-2-pyridinyl)thio]-, methyl ester (9CI)  
 (CA INDEX NAME)

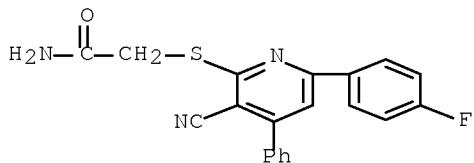


RN 94360-67-5 HCPLUS

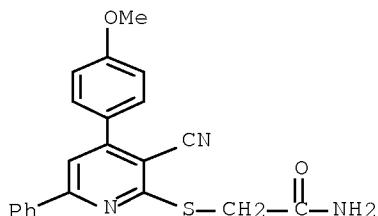
CN Acetamide, 2-[(3-cyano-4,6-diphenyl-2-pyridinyl)thio]- (CA INDEX NAME)



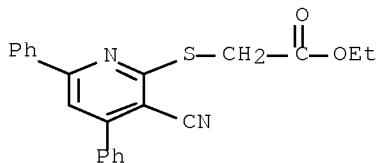
RN 94360-68-6 HCAPLUS  
 CN Acetamide, 2-[ [3-cyano-6-(4-fluorophenyl)-4-phenyl-2-pyridinyl]thio]- (CA INDEX NAME)



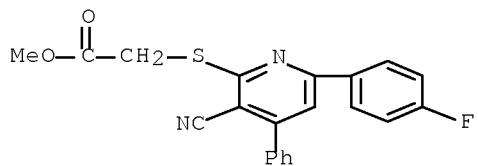
RN 94360-69-7 HCAPLUS  
 CN Acetamide, 2-[ [3-cyano-4-(4-methoxyphenyl)-6-phenyl-2-pyridinyl]thio]- (CA INDEX NAME)



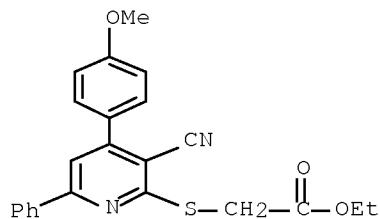
RN 94360-72-2 HCAPLUS  
 CN Acetic acid, 2-[ (3-cyano-4,6-diphenyl-2-pyridinyl)thio]-, ethyl ester (CA INDEX NAME)



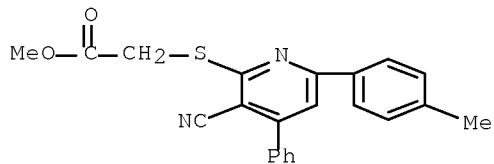
RN 94360-73-3 HCAPLUS  
 CN Acetic acid, [ [3-cyano-6-(4-fluorophenyl)-4-phenyl-2-pyridinyl]thio]-, methyl ester (9CI) (CA INDEX NAME)



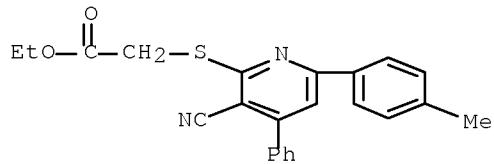
RN 94360-74-4 HCPLUS  
 CN Acetic acid, 2-[3-cyano-4-(4-methoxyphenyl)-6-phenyl-2-pyridinyl]thio]-, ethyl ester (CA INDEX NAME)



RN 94360-75-5 HCPLUS  
 CN Acetic acid, [3-cyano-6-(4-methylphenyl)-4-phenyl-2-pyridinyl]thio]-, methyl ester (9CI) (CA INDEX NAME)

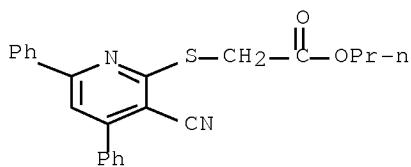


RN 94360-76-6 HCPLUS  
 CN Acetic acid, [3-cyano-6-(4-methylphenyl)-4-phenyl-2-pyridinyl]thio]-, ethyl ester (9CI) (CA INDEX NAME)



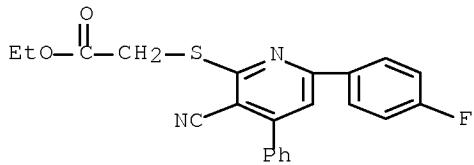
RN 94360-77-7 HCPLUS  
 CN Acetic acid, [(3-cyano-4,6-diphenyl-2-pyridinyl)thio]-, propyl ester (9CI)

(CA INDEX NAME)



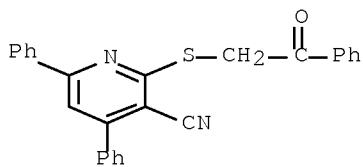
RN 94360-78-8 HCAPLUS

CN Acetic acid, [ [3-cyano-6-(4-fluorophenyl)-4-phenyl-2-pyridinyl]thio]-, ethyl ester (9CI) (CA INDEX NAME)



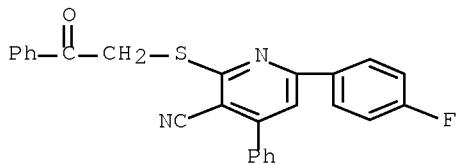
RN 94360-86-8 HCAPLUS

CN 3-Pyridinecarbonitrile, 2-[(2-oxo-2-phenylethyl)thio]-4,6-diphenyl- (CA INDEX NAME)



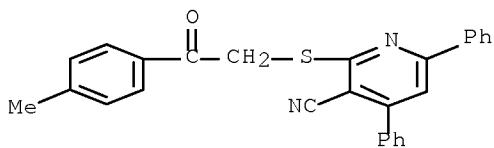
RN 94360-87-9 HCAPLUS

CN 3-Pyridinecarbonitrile, 6-(4-fluorophenyl)-2-[(2-oxo-2-phenylethyl)thio]-4-phenyl- (CA INDEX NAME)



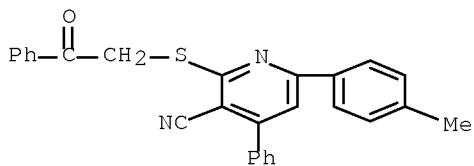
RN 94360-88-0 HCPLUS

CN 3-Pyridinecarbonitrile, 2-[[2-(4-methylphenyl)-2-oxoethyl]thio]-4,6-diphenyl- (CA INDEX NAME)



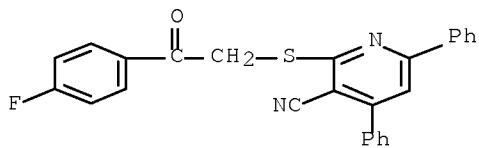
RN 94360-89-1 HCPLUS

CN 3-Pyridinecarbonitrile, 6-(4-methylphenyl)-2-[(2-oxo-2-phenylethyl)thio]-4-phenyl- (CA INDEX NAME)



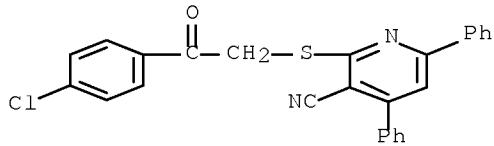
RN 94360-90-4 HCPLUS

CN 3-Pyridinecarbonitrile, 2-[[2-(4-fluorophenyl)-2-oxoethyl]thio]-4,6-diphenyl- (CA INDEX NAME)



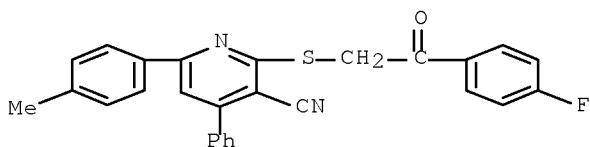
RN 94360-91-5 HCPLUS

CN 3-Pyridinecarbonitrile, 2-[[2-(4-chlorophenyl)-2-oxoethyl]thio]-4,6-diphenyl- (CA INDEX NAME)



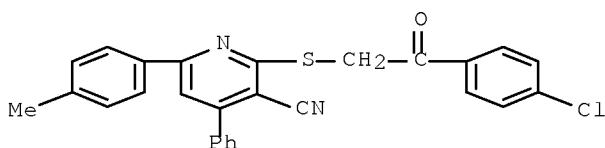
RN 94360-92-6 HCPLUS

CN 3-Pyridinecarbonitrile, 2-[[2-(4-fluorophenyl)-2-oxoethyl]thio]-6-(4-methylphenyl)-4-phenyl- (CA INDEX NAME)



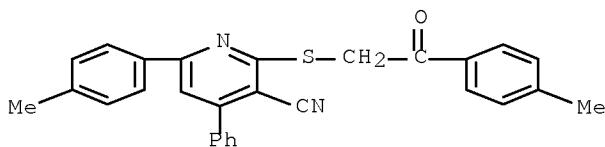
RN 94360-93-7 HCPLUS

CN 3-Pyridinecarbonitrile, 2-[[2-(4-chlorophenyl)-2-oxoethyl]thio]-6-(4-methylphenyl)-4-phenyl- (CA INDEX NAME)



RN 94360-94-8 HCPLUS

CN 3-Pyridinecarbonitrile, 6-(4-methylphenyl)-2-[[2-(4-methylphenyl)-2-oxoethyl]thio]-4-phenyl- (CA INDEX NAME)

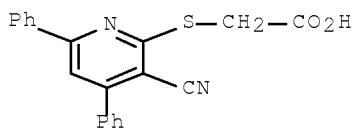


IT 94361-03-2P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 94361-03-2 HCPLUS

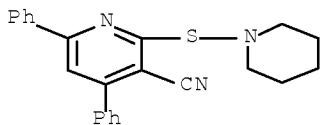
CN Acetic acid, 2-[(3-cyano-4,6-diphenyl-2-pyridinyl)thio]- (CA INDEX NAME)



DOCUMENT NUMBER: 97:55723  
 ORIGINAL REFERENCE NO.: 97:9385a, 9388a  
 TITLE: Synthesis of 3-oxoisothiazolo[5,4-b]pyridines  
 AUTHOR(S): Krauze, A.; Bomika, Z.; Pelcers, J.; Mazeika, I.;  
 Duburs, G.  
 CORPORATE SOURCE: Inst. Org. Sint., Riga, 226006, USSR  
 SOURCE: Khimiya Geterotsiklichesikh Soedinenii (1982)  
 ), (4), 508-12  
 CODEN: KGSSAQ; ISSN: 0453-8234  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 OTHER SOURCE(S): CASREACT 97:55723  
 ED Entered STN: 12 May 1984  
 GI

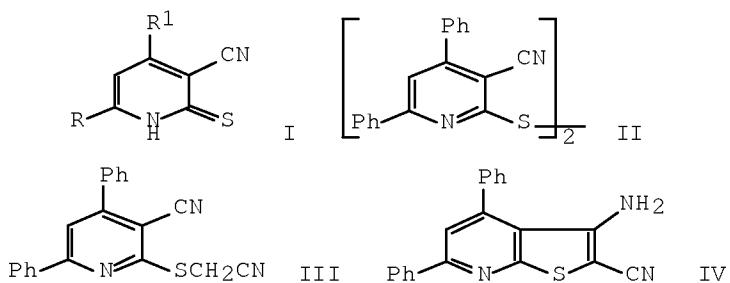


AB Reaction of thioxopyridinecarbonitriles (I) or cyanopyridinyl disulfides (II) with H<sub>2</sub>SO<sub>4</sub> gave III (R, R1 = Ph, Ph; Ph, Me; Me, Ph; Me, Me), which with PBr<sub>5</sub> gave IV (R, R1 = Ph, Ph; o-F<sub>2</sub>CHOC<sub>6</sub>H<sub>4</sub>, Ph; Ph, Me; Me, Me), also obtained from I or II and Br. Some reactions of III and IV were described.  
 CC 28-7 (Heterocyclic Compounds (More Than One Hetero Atom))  
 Section cross-reference(s): 27  
 IT 16232-42-1P 82447-82-3P 82447-83-4P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 IT 82447-82-3P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 82447-82-3 HCPLUS  
 CN Piperidine, 1-[(3-cyano-4,6-diphenyl-2-pyridinyl)thio]- (9CI) (CA INDEX NAME)



L57 ANSWER 49 OF 51 HCPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1981:480662 HCPLUS Full-text  
 DOCUMENT NUMBER: 95:80662  
 ORIGINAL REFERENCE NO.: 95:13635a, 13638a  
 TITLE: Synthesis and some reactions of 3-cyanopyridine-2-thiones

AUTHOR(S): Krauze, A.; Bomika, Z.; Shestopalov, A. M.;  
Rodinovskaya, L. A.; Pelcers, J.; Duburs, G.;  
Sharanin, Yu. A.; Promonenkov, V. K.  
CORPORATE SOURCE: Inst. Org. Sint., Riga, 226006, USSR  
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1981  
(3), 377-82  
DOCUMENT TYPE: CODEN: KGSSAQ; ISSN: 0453-8234  
LANGUAGE: Journal  
OTHER SOURCE(S): Russian  
ED    Entered STN: CASREACT 95:80662  
GI    12 May 1984



AB Cyanopyridinethiones I [R = Ph, Me, 4-MeOC<sub>6</sub>H<sub>4</sub>, 4-MeC<sub>6</sub>H<sub>4</sub>, 4-FC<sub>6</sub>H<sub>4</sub>; R<sub>1</sub> = Ph, 4-C<sub>1</sub>C<sub>6</sub>H<sub>4</sub>, 4-MeOC<sub>6</sub>H<sub>6</sub>, 4-O<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>, 4-Me<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>, 2-(F<sub>2</sub>CHO)C<sub>6</sub>H<sub>4</sub>] were prepared by cyclocondensation of RCOCH<sub>2</sub>CHR<sub>1</sub>CH(CN)<sub>2</sub> in refluxing Me<sub>2</sub>CHOH containing morpholine and powdered S. Alternatively, condensation of PhCOCH:CHPh with NCCH<sub>2</sub>C(S)NH<sub>2</sub> in MeOH containing NaOMe gave I (R = R<sub>1</sub> = Ph). I underwent oxidative coupling, alkylation, and cyclocondensation reactions. Thus, treatment of I (R = R<sub>1</sub> = Ph) with iodine in aqueous NaOH gave the disulfide II. Alkylation of I (R = R<sub>1</sub> = Ph) by ClCH<sub>2</sub>CN gave pyridine III, which cyclized in EtOH containing NaOMe to give thiopyridine IV.

### CC 27-17 (Heterocyclic Compounds (One Hetero Atom))

IT 78564-27-9P 78564-28-0P 78564-29-1P 78564-30-4P

78615-26-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

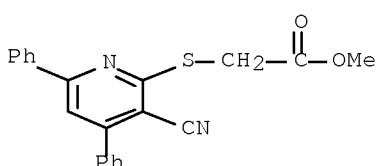
(preparation and cyclocondensation reaction of)

$$78564 - 30 \cdot 4P$$

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

### (preparation and

RN 78564-30-4 HCAPLUS  
CN Acetic acid, [(3-cyano-4,6-diphenyl-2-pyridinyl)thio]-, methyl ester (9CI)  
(CA INDEX NAME)



=> d ibib ab hitstr 50-51

YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, USPATFULL' - CONTINUE? (Y)/N:y

L57 ANSWER 50 OF 51 USPATFULL on STN  
 ACCESSION NUMBER: 2007:94584 USPATFULL Full-text  
 TITLE: Metal complexes with bipodal ligands  
 INVENTOR(S): Stoessel, Philipp, Frankfurt, GERMANY, FEDERAL REPUBLIC OF  
 Gerhard, Anja, Veitshoechheim, GERMANY, FEDERAL REPUBLIC OF  
 PATENT ASSIGNEE(S): Merck Patent GmbH, Darmstadt, GERMANY, FEDERAL REPUBLIC OF, 64293 (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20070082284	A1	20070412
APPLICATION INFO.:	US 2004-578039	A1	20041021 (10)
	WO 2004-EP11890		20041021
			20060501 PCT 371 date

	NUMBER	DATE
PRIORITY INFORMATION:	DE 2003-10350722	20031030 <--
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	CONNOLLY BOVE LODGE & HUTZ, LLP, P O BOX 2207, WILMINGTON, DE, 19899, US	
NUMBER OF CLAIMS:	28	
EXEMPLARY CLAIM:	1	
LINE COUNT:	907	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention describes novel metal complexes with bipolar ligands. Compounds of this type can be employed as functional materials in a number of different applications which can be ascribed to the electronics industry in the broadest sense.

L57 ANSWER 51 OF 51 USPATFULL on STN  
 ACCESSION NUMBER: 2007:18082 USPATFULL Full-text  
 TITLE: Glyoxalase inhibitors  
 INVENTOR(S): Ashton, Mark, Abingdon Oxfordshire, UNITED KINGDOM  
 Davidson, Alan, Abingdon, Oxfordshire, UNITED KINGDOM  
 Thomas, Russell, Oxfordshire, UNITED KINGDOM  
 Whittaker, Mark, Oxfordshire, UNITED KINGDOM

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20070015799	A1	20070118
APPLICATION INFO.:	US 2004-556901	A1	20040514 (10)
	WO 2004-GB2101		20040514
			20060202 PCT 371 date

NUMBER DATE

PRIORITY INFORMATION: GB 2003-11195 20030515 <--  
 DOCUMENT TYPE: Utility  
 FILE SEGMENT: APPLICATION  
 LEGAL REPRESENTATIVE: NIXON & VANDERHYE, PC, 901 NORTH GLEBE ROAD, 11TH FLOOR, ARLINGTON, VA, 22203, US  
 NUMBER OF CLAIMS: 49  
 EXEMPLARY CLAIM: 1  
 LINE COUNT: 1648

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

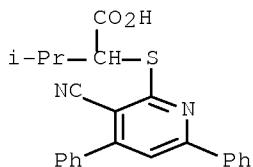
AB This invention relates to compounds of formula (I) which are glyoxalase I inhibitors, pharmaceutical salts or compositions comprising such compounds, and the use of such compositions and compounds to treat various conditions alleviated by the inhibition of glyoxalase 1. Wherein X is N or CH. R.<sup>2</sup> is H, CF<sub>3</sub>; or optionally substituted C<sub>5-6</sub> aryl, C<sub>3-7</sub> cycloalkyl, C<sub>5-7</sub> heterocyclyl. R.<sup>3</sup> is H; or optionally substituted C<sub>5-6</sub> aryl, C<sub>3-7</sub> cycloalkyl, C<sub>5-7</sub> heterocyclyl. Alternatively R.<sup>2</sup> and R.<sup>3</sup> together form an optionally substituted C<sub>3-4</sub> alkylene group wherein L<sup>3</sup> and L<sup>4</sup> are single bonds thus forming a C<sub>5-6</sub> ring fused with the aromatic ring to which L<sup>3</sup> and L<sup>4</sup> are attached. L<sup>3</sup> and L<sup>4</sup> are independently selected from a single bond, optionally substituted C<sub>1-4</sub> alkylene, -L<sup>9</sup>YN(OH)C(.dbd.O)L<sup>10-</sup> and -L<sup>9</sup>C(.dbd.O)N(OH)YL<sup>10-</sup>, wherein L<sup>9</sup> and L<sup>10</sup> are independently selected from optionally substituted C<sub>1-4</sub> alkylene, C<sub>5-6</sub> arylene, C<sub>1-4</sub> alkylene-C<sub>5-6</sub> arylene and a single bond, wherein Y is NH or a single bond.

IT 332040-74-1P 352544-89-9P 354555-20-7P  
354555-66-1P 354555-67-2P 371222-06-9P  
371237-12-6P

(preparation of benzamide derivs. useful as glyoxalase inhibitors)

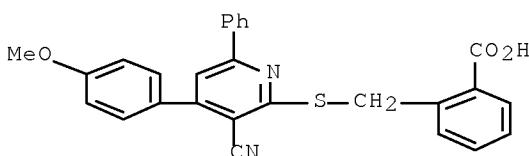
RN 332040-74-1 USPATFULL

CN Butanoic acid, 2-[(3-cyano-4,6-diphenyl-2-pyridinyl)thio]-3-methyl- (CA INDEX NAME)



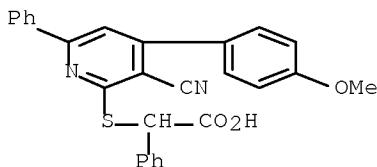
RN 352544-89-9 USPATFULL

CN Benzoic acid, 2-[[[3-cyano-4-(4-methoxyphenyl)-6-phenyl-2-pyridinyl]thio]methyl]- (CA INDEX NAME)



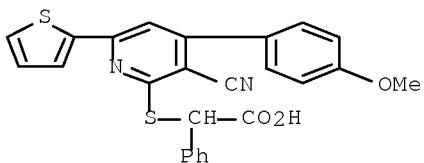
RN 354555-20-7 USPATFULL

CN Benzeneacetic acid,  $\alpha$ -[ [3-cyano-4-(4-methoxyphenyl)-6-phenyl-2-pyridinyl]thio]- (CA INDEX NAME)



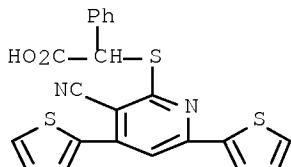
RN 354555-66-1 USPATFULL

CN Benzeneacetic acid,  $\alpha$ -[ [3-cyano-4-(4-methoxyphenyl)-6-(2-thienyl)-2-pyridinyl]thio]- (CA INDEX NAME)



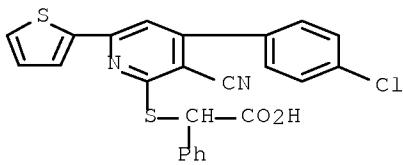
RN 354555-67-2 USPATFULL

CN Benzeneacetic acid,  $\alpha$ -[ (3-cyano-4,6-di-2-thienyl-2-pyridinyl)thio]- (CA INDEX NAME)



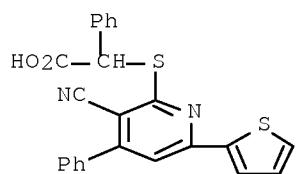
RN 371222-06-9 USPATFULL

CN Benzeneacetic acid,  $\alpha$ -[ [4-(4-chlorophenyl)-3-cyano-6-(2-thienyl)-2-pyridinyl]thio]- (CA INDEX NAME)



RN 371237-12-6 USPATFULL

CN Benzeneacetic acid,  $\alpha$ -[[3-cyano-4-phenyl-6-(2-thienyl)-2-pyridinyl]thio]- (CA INDEX NAME)



=> d que nos 138

L1           1 SEA FILE=HCAPLUS ABB=ON PLU=ON US2006-542351/APPS  
 L3           TRANSFER PLU=ON L1 1- RN :           22 TERMS  
 L4           22 SEA FILE=REGISTRY ABB=ON PLU=ON L3  
 L12          STR  
 L14          6844 SEA FILE=REGISTRY SSS FUL L12  
 L15          17 SEA FILE=REGISTRY ABB=ON PLU=ON L4 AND L14  
 L17          QUE ABB=ON PLU=ON MOIR, D?/AU  
 L18          QUE ABB=ON PLU=ON XIANG, Y?/AU  
 L19          QUE ABB=ON PLU=ON ARVANITES, A?/AU  
 L20          QUE ABB=ON PLU=ON ARVANITES, T?/AU  
 L21          QUE ABB=ON PLU=ON ALI, S?/AU  
 L22          QUE ABB=ON PLU=ON GENG, B?/AU  
 L23          QUE ABB=ON PLU=ON ASHWELL, M?/AU  
 L24          QUE ABB=ON PLU=ON ORGUEIRA, H?/AU  
 L25          QUE ABB=ON PLU=ON KAPLAN, A?/AU  
 L26          QUE ABB=ON PLU=ON (OSCIENT OR ARQULE)/CS, SO, PA  
 L28          QUE ABB=ON PLU=ON INFECTION+PFT, OLD, NEW, NT/CT(L) BACTER  
              ?  
 L29          QUE ABB=ON PLU=ON "ANTIBACTERIAL AGENTS"+PFT, OLD, NEW/C  
              T  
 L30          QUE ABB=ON PLU=ON ANTIINFECT? OR (ANTI(1W) INFECT?)  
 L31          QUE ABB=ON PLU=ON ANTIBACTER? OR ANTIBIOT? OR ANTIMICR  
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 L32          QUE ABB=ON PLU=ON (A61P0031-04 OR A61P0031-06 OR A61P0  
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 L33          67 SEA FILE=HCAPLUS ABB=ON PLU=ON L14  
 L34          5 SEA FILE=HCAPLUS ABB=ON PLU=ON L15  
 L35          67 SEA FILE=HCAPLUS ABB=ON PLU=ON (L33 OR L34)  
 L36          8 SEA FILE=HCAPLUS ABB=ON PLU=ON L35 AND (L28 OR L29 OR L30 OR  
              L31 OR L32)  
 L37          67 SEA FILE=HCAPLUS ABB=ON PLU=ON (L33 OR L34 OR L35 OR L36)  
 L38          2 SEA FILE=HCAPLUS ABB=ON PLU=ON L37 AND (L17 OR L18 OR L19 OR  
              L20 OR L21 OR L22 OR L23 OR L24 OR L25 OR L26)

=> d his 144

(FILE 'USPATFULL, USPATOLD, USPAT2' ENTERED AT 16:51:16 ON 18 SEP 2008)  
 L44          1 S L43 AND L17-L26

=> d que nos 144

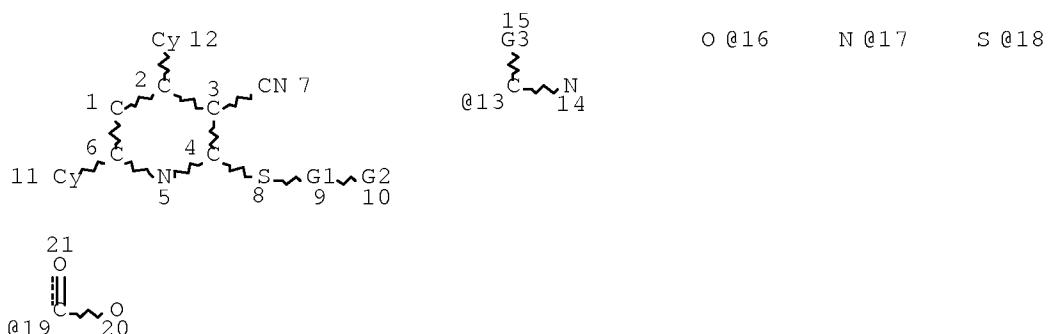
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 L17          QUE ABB=ON PLU=ON MOIR, D?/AU  
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 L19          QUE ABB=ON PLU=ON ARVANITES, A?/AU  
 L20          QUE ABB=ON PLU=ON ARVANITES, T?/AU  
 L21          QUE ABB=ON PLU=ON ALI, S?/AU  
 L22          QUE ABB=ON PLU=ON GENG, B?/AU  
 L23          QUE ABB=ON PLU=ON ASHWELL, M?/AU  
 L24          QUE ABB=ON PLU=ON ORGUEIRA, H?/AU  
 L25          QUE ABB=ON PLU=ON KAPLAN, A?/AU  
 L26          QUE ABB=ON PLU=ON (OSCIENT OR ARQULE)/CS, SO, PA  
 L42          27 SEA FILE=REGISTRY ABB=ON PLU=ON L14 AND (USPATFULL OR USPAT2  
              OR USPATOLD)/LC  
 L43          6 SEA L42  
 L44          1 SEA L43 AND (L17 OR L18 OR L19 OR L20 OR L21 OR L22 OR L23 OR

L24 OR L25 OR L26)

=&gt; d que 147

L12

STR



REP G1=(0-4) C

VAR G2=CY/19/13

VAR G3=16/17/18

## NODE ATTRIBUTES:

NSPEC IS RC AT 14  
 CONNECT IS E1 RC AT 16  
 CONNECT IS E1 RC AT 17  
 CONNECT IS E1 RC AT 18  
 DEFAULT MLEVEL IS ATOM  
 GGCAT IS MCY UNS AT 11  
 GGCAT IS MCY UNS AT 12  
 DEFAULT ECLEVEL IS LIMITED

## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

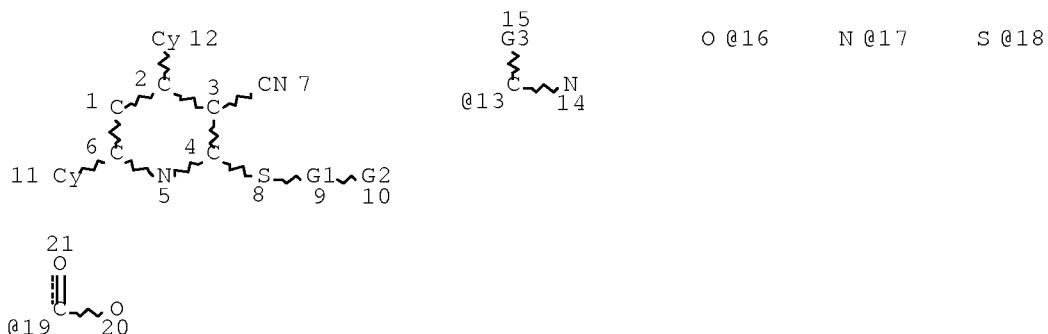
NUMBER OF NODES IS 21

## STEREO ATTRIBUTES: NONE

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 L47 0 SEA FILE=REGISTRY ABB=ON PLU=ON L14 AND (MEDLINE OR BIOSIS  
 OR EMBASE OR CABAB OR BIOTECHNO OR DRUGU OR VETU)/LC

=&gt; d que 154

L2

2 SEA FILE=WPIX ABB=ON PLU=ON US2006-542351/APPS  
 L12 STR

REP G1=(0-4) C

VAR G2=CY/19/13

VAR G3=16/17/18

NODE ATTRIBUTES:

NSPEC IS RC AT 14  
 CONNECT IS E1 RC AT 16  
 CONNECT IS E1 RC AT 17  
 CONNECT IS E1 RC AT 18  
 DEFAULT MLEVEL IS ATOM  
 GGCAT IS MCY UNS AT 11  
 GGCAT IS MCY UNS AT 12  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 21

STEREO ATTRIBUTES: NONE

L17 QUE ABB=ON PLU=ON MOIR, D?/AU  
 L18 QUE ABB=ON PLU=ON XIANG, Y?/AU  
 L19 QUE ABB=ON PLU=ON ARVANITES, A?/AU  
 L20 QUE ABB=ON PLU=ON ARVANITES, T?/AU  
 L21 QUE ABB=ON PLU=ON ALI, S?/AU  
 L22 QUE ABB=ON PLU=ON GENG, B?/AU  
 L23 QUE ABB=ON PLU=ON ASHWELL, M?/AU  
 L24 QUE ABB=ON PLU=ON ORGUEIRA, H?/AU  
 L25 QUE ABB=ON PLU=ON KAPLAN, A?/AU  
 L26 QUE ABB=ON PLU=ON (OSCIENT OR ARQUELE)/CS, SO, PA  
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 L51 7 SEA FILE=WPIX ABB=ON PLU=ON (RABM4F/DCN OR RAF3OD/DCN OR  
 RAF3OJ/DCN OR RAF3ON/DCN OR RAF3OO/DCN OR RAF3OQ/DCN OR  
 RAF3OS/DCN OR RAF3OT/DCN OR RAF3OY/DCN OR RAF3OZ/DCN OR  
 RAF3PA/DCN OR RAF3PB/DCN OR RAF3P4/DCN OR RAF3P5/DCN OR  
 RAF3P6/DCN OR RAF3P9/DCN OR RAI1QS/DCN OR RAOHFY/DCN OR  
 RAOHFZ/DCN OR RAOHG0/DCN OR RAOHG1/DCN OR RAOHG2/DCN OR  
 RAOHG3/DCN OR RAOHG4/DCN OR RAR23T/DCN OR RAVPWX/DCN) OR  
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 L52 1 SEA FILE=WPIX ABB=ON PLU=ON L51 AND (L17 OR L18 OR L19 OR  
 L20 OR L21 OR L22 OR L23 OR L24 OR L25 OR L26)  
 L53 1 SEA FILE=WPIX ABB=ON PLU=ON L52 AND L2  
 L54 1 SEA FILE=WPIX ABB=ON PLU=ON (L52 OR L53)

=> dup rem 138 144 154

FILE 'HCAPLUS' ENTERED AT 17:10:37 ON 18 SEP 2008

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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FILE 'USPATFULL' ENTERED AT 17:10:37 ON 18 SEP 2008

CA INDEXING COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'WPIX' ENTERED AT 17:10:37 ON 18 SEP 2008

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PROCESSING COMPLETED FOR L38

PROCESSING COMPLETED FOR L44

PROCESSING COMPLETED FOR L54

L58           3 DUP REM L38 L44 L54 (1 DUPLICATE REMOVED)  
ANSWERS '1-2' FROM FILE HCAPLUS  
ANSWER '3' FROM FILE USPATFULL

=> file stnguide  
FILE 'STNGUIDE' ENTERED AT 17:10:58 ON 18 SEP 2008  
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FILE CONTAINS CURRENT INFORMATION.  
LAST RELOADED: Sep 12, 2008 (20080912/UP).

=> d ibib ed abs hitind hitstr 1-2  
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, USPATFULL' - CONTINUE? (Y)/N:y

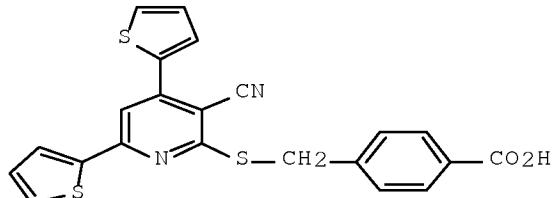
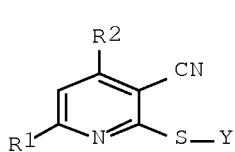
L58 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 1  
ACCESSION NUMBER: 2004:633527 HCAPLUS Full-text  
DOCUMENT NUMBER: 141:174078  
TITLE: Preparation of thienylpyridinecarbonitriles as bacterial enoyl-ACP reductase (FabI) inhibitors.  
INVENTOR(S): Moir, Donald T.; Xiang, Yibin;  
Arvanites, Anthony C.; Ali, Syed  
Masarrat; Geng, Bolin; Ashwell,  
Mark A.; Orqueira, Hernan Antonio  
PATENT ASSIGNEE(S): Genome Therapeutics Corporation, USA; Argule  
SOURCE: PCT Int. Appl., 54 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004064837	A1	20040805	WO 2004-US1327	20040116 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ				
US 20070027190	A1	20070201	US 2006-542351	20060807
PRIORITY APPLN. INFO.:			US 2003-441411P	P 20030117
			WO 2004-US1327	W 20040116

OTHER SOURCE(S): MARPAT 141:174078

ED Entered STN: 06 Aug 2004

GI



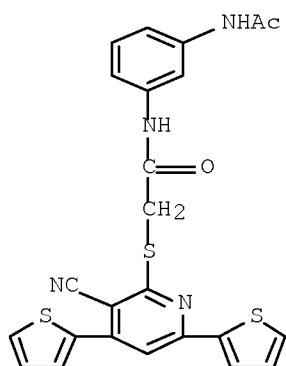
I

II

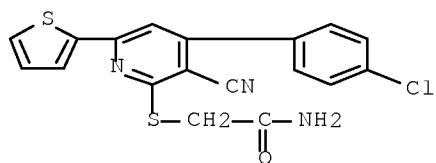
AB Title compds. I [R1, R2 = (un)substituted monocyclic aryl, heteroaryl; Y = X1-X2; X1 = bond, (un)substituted alkylene; X2 = aryl, heteroaryl, cycloaliph., etc.] and their pharmaceutically acceptable salts were prepared. For example, condensation-annulation of 1,3-di-2-thienyl-2-propen-1-one and 2-cyanoethanethioamide, followed by 4-(bromomethyl)benzoic acid S-alkylation of the resulting thioxopyridinecarbonitrile (no data provided), afforded claimed thienylpyridinecarbonitrile II. In methicillin-resistant *Staphylococcus*

aureus minimal inhibitory concentration (MIC) assays, 14-examples of compds. I exhibited MIC values ranging from 0.75->64 µg/mL, e.g., the MIC value of thienylpyridinecarbonitrile II was 4 µg/mL. Compds. I are claimed useful for the. Of note, compds. I are proposed to inhibit bacterial enoyl-ACP reductase (FabI), a NADH-dependent enoyl [acyl carrier protein] reductase enzyme in the fatty acid biosynthesis pathway.

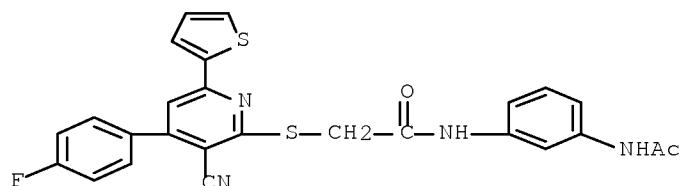
IC ICM A61K031-44  
 ICS C07D213-84; A61P031-04  
 CC 27-16 (Heterocyclic Compounds (One Hetero Atom))  
 Section cross-reference(s): 1  
 ST thienylpyridinecarbonitrile prepn antibacterial agent fabI inhibition; NADH dependent enoyl acyl carrier protein reductase thienylpyridinecarbonitrile prepn; methicillin resistant staphylococcus aureus thienylpyridinecarbonitrile prepn antibacterial agent  
 IT Dysentery  
     (bacillary, infection, treatment of; preparation of thienylpyridinecarbonitriles as bacterial enoyl-ACP reductase (FabI) inhibitors.)  
 IT Infection  
     (bacterial; preparation of thienylpyridinecarbonitriles as bacterial enoyl-ACP reductase (FabI) inhibitors.)  
 IT Antibacterial agents  
 Human  
     (preparation of thienylpyridinecarbonitriles as bacterial enoyl-ACP reductase (FabI) inhibitors.)  
 IT 296797-06-3P 296798-15-7P 300844-13-7P  
 300844-14-8P 328282-01-5P 340808-61-9P  
 354545-70-3P 354555-67-2P 445266-27-3P  
 445383-75-5P 496018-68-9P 733052-04-5P  
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 733052-08-9P 733052-09-0P  
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
     (preparation of thienylpyridinecarbonitriles as bacterial enoyl-ACP reductase (FabI) inhibitors.)  
 IT 296797-06-3P 296798-15-7P 300844-13-7P  
 300844-14-8P 328282-01-5P 340808-61-9P  
 354545-70-3P 354555-67-2P 445266-27-3P  
 445383-75-5P 496018-68-9P 733052-04-5P  
 733052-05-6P 733052-06-7P 733052-07-8P  
 733052-08-9P 733052-09-0P  
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
     (preparation of thienylpyridinecarbonitriles as bacterial enoyl-ACP reductase (FabI) inhibitors.)  
 RN 296797-06-3 HCPLUS  
 CN Acetamide, N-[3-(acetylamino)phenyl]-2-[(3-cyano-4,6-di-2-thienyl-2-pyridinyl)thio]- (CA INDEX NAME)



RN 296798-15-7 HCAPLUS

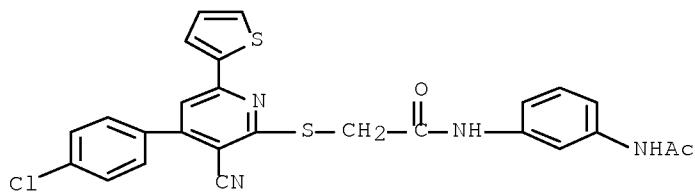
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(CA INDEX NAME)

RN 300844-13-7 HCAPLUS

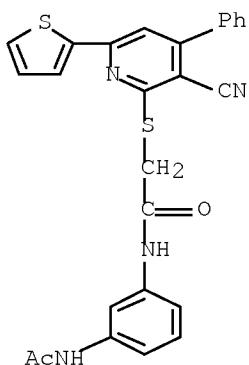
CN Acetamide, N-[3-(acetylamino)phenyl]-2-[ [3-cyano-4-(4-fluorophenyl)-6-(2-thienyl)-2-pyridinyl]thio]-  
(CA INDEX NAME)

RN 300844-14-8 HCAPLUS

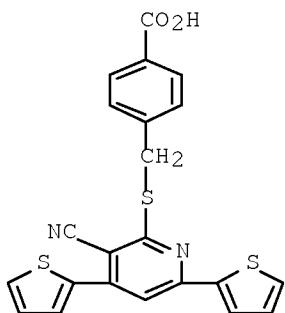
CN Acetamide, N-[3-(acetylamino)phenyl]-2-[ [4-(4-chlorophenyl)-3-cyano-6-(2-thienyl)-2-pyridinyl]thio]-  
(CA INDEX NAME)



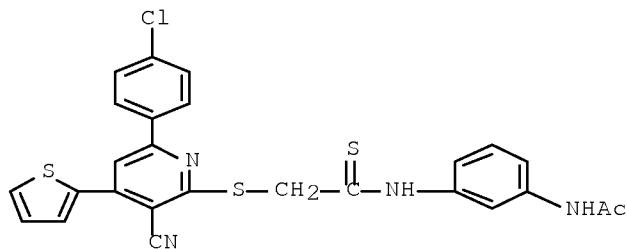
RN 328282-01-5 HCPLUS  
 CN Acetamide, N-[3-(acetylamino)phenyl]-2-[[3-cyano-4-phenyl-6-(2-thienyl)-2-pyridinyl]thio]- (CA INDEX NAME)



RN 340808-61-9 HCPLUS  
 CN Benzoic acid, 4-[(3-cyano-4,6-di-2-thienyl-2-pyridinyl)thio]methyl- (CA INDEX NAME)

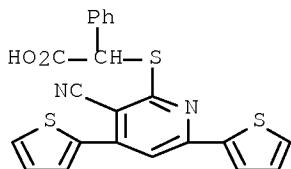


RN 354545-70-3 HCPLUS  
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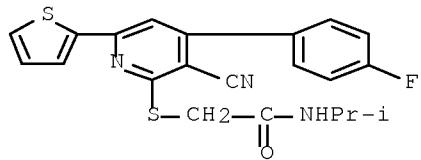
RN 354555-67-2 HCAPLUS

CN Benzeneacetic acid,  $\alpha$ -[ (3-cyano-4,6-di-2-thienyl-2-pyridinyl)thio]-  
(CA INDEX NAME)



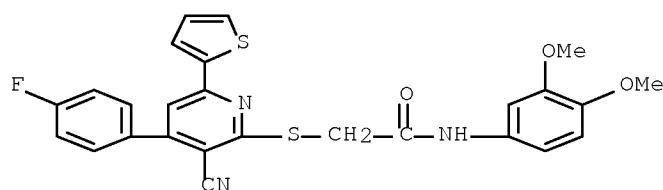
RN 445266-27-3 HCAPLUS

CN Acetamide, 2-[ [3-cyano-4-(4-fluorophenyl)-6-(2-thienyl)-2-pyridinyl]thio]-  
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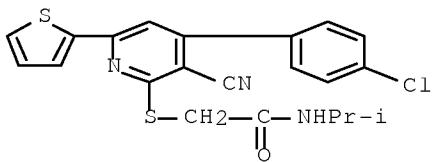
RN 445383-75-5 HCAPLUS

CN Acetamide, 2-[ [3-cyano-4-(4-fluorophenyl)-6-(2-thienyl)-2-pyridinyl]thio]-  
N-(3,4-dimethoxyphenyl)- (CA INDEX NAME)



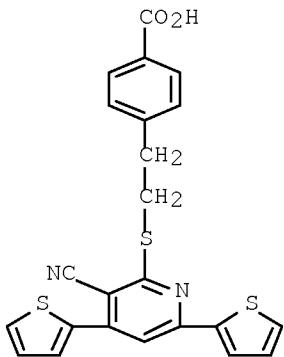
RN 496018-68-9 HCAPLUS

CN Acetamide, 2-[[4-(4-chlorophenyl)-3-cyano-6-(2-thienyl)-2-pyridinyl]thio]-N-(1-methylethyl)- (CA INDEX NAME)



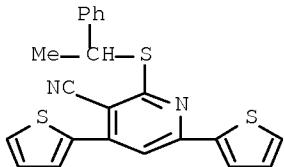
RN 733052-04-5 HCAPLUS

CN Benzoic acid, 4-[2-[(3-cyano-4,6-di-2-thienyl-2-pyridinyl)thio]ethyl]- (CA INDEX NAME)



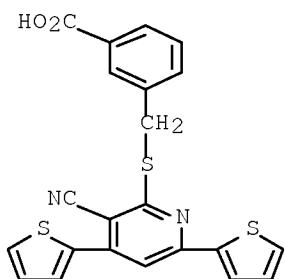
RN 733052-05-6 HCAPLUS

CN 3-Pyridinecarbonitrile, 2-[(1-phenylethyl)thio]-4,6-di-2-thienyl- (CA INDEX NAME)

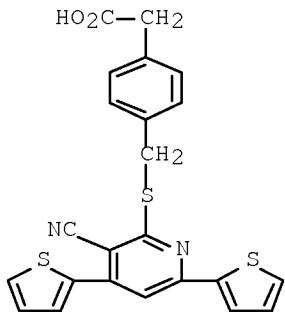


RN 733052-06-7 HCAPLUS

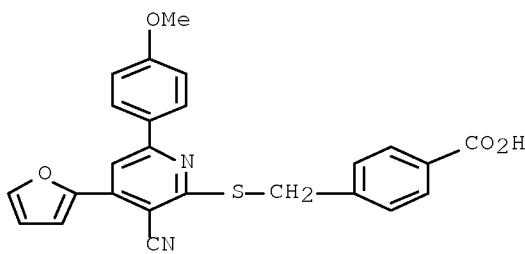
CN Benzoic acid, 3-[(3-cyano-4,6-di-2-thienyl-2-pyridinyl)thio]methyl- (CA INDEX NAME)



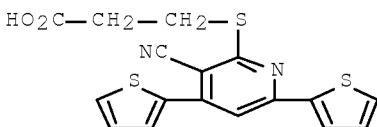
RN 733052-07-8 HCAPLUS  
 CN Benzeneacetic acid, 4-[[3-cyano-4,6-di-2-thienyl-2-pyridinyl]thio]methyl]- (CA INDEX NAME)



RN 733052-08-9 HCAPLUS  
 CN Benzoic acid, 4-[[3-cyano-4-(2-furanyl)-6-(4-methoxyphenyl)-2-pyridinyl]thio]methyl]- (CA INDEX NAME)



RN 733052-09-0 HCAPLUS  
 CN Propanoic acid, 3-[(3-cyano-4,6-di-2-thienyl-2-pyridinyl)thio]- (CA INDEX NAME)



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L58 ANSWER 2 OF 3 HCPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:374624 HCPLUS Full-text

DOCUMENT NUMBER: 141:239652

TITLE: Identification and characterization of inhibitors of bacterial enoyl-acyl carrier protein reductase

AUTHOR(S): Ling, Losee L.; Xian, Jun; Ali, Syed;  
Geng, Bolin; Fan, Jun; Mills, Debra M.;  
Arvanites, Anthony C.; Orqueira,  
Hernan; Ashwell, Mark A.; Carmel,  
Gilles; Yiang, Yibin; Moir, Donald  
T.

CORPORATE SOURCE: Genome Therapeutics Corporation, Waltham, MA, 02453,  
USA

SOURCE: Antimicrobial Agents and Chemotherapy (2004), 48(5),  
1541-1547

CODEN: AMACQ; ISSN: 0066-4804

PUBLISHER: American Society for Microbiology

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 10 May 2004

AB Bacterial enoyl-acyl carrier protein reductase (ENR) catalyzes an essential step in fatty acid biosynthesis. ENR is an attractive target for narrow-spectrum antibacterial drug discovery because of its essential role in metabolism and its sequence conservation across many bacterial species. In addition, the bacterial ENR sequence and structural organization are distinctly different from those of mammalian fatty acid biosynthesis enzymes. High-throughput screening to identify inhibitors of *Escherichia coli* ENR yielded four structurally distinct classes of hits. Several members of one of these, the 2-(alkylthio)-4,6-diphenylpyridine-3- carbonitriles ("thiopyridines"), inhibited both purified ENR (50% inhibitory concentration [IC<sub>50</sub>] = 3-25 µM) and the growth of *Staphylococcus aureus* and *Bacillus subtilis* (MIC = 1-64 µg/mL). The effect on cell growth is due in part to inhibition of fatty acid biosynthesis as judged by inhibition of incorporation of [<sup>14</sup>C]acetate into fatty acids and by the increased sensitivity of cells that underexpress an ENR-encoding gene (4-8-fold MIC shift). Synthesis of a variety of compds. in this chemical series revealed a correlation between IC<sub>50</sub> and MIC, and the results provided initial structure-activity relationships. Preliminary structure-activity relationships, potency on purified ENR, and activity on bacterial cells indicate that members of the thiopyridine chemical series are effective fatty acid biosynthesis inhibitors suitable for further antibacterial development.

CC 10-5 (Microbial, Algal, and Fungal Biochemistry)

IT Antibacterial agents  
Antibacterial agents

*Bacillus subtilis*

*Escherichia coli*

*Staphylococcus aureus*

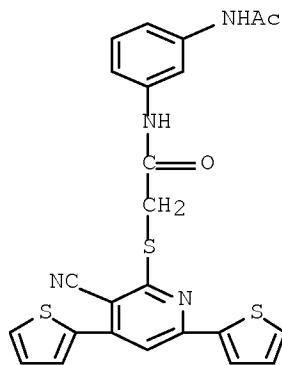
(inhibitors of bacterial enoyl-acyl carrier protein reductase)

IT 37251-08-4, Enoyl-acyl carrier protein reductase 296797-06-3,  
 GTC 268733 296798-15-7, GTC 268724 300844-13-7, GTC  
268726 340808-61-9, GTC 004061 354555-67-2, GTC 268963  
445266-27-3, GTC 268776 445383-75-5, GTC 268847  
496018-68-9, GTC 268925 733052-04-5, GTC 343129  
733052-06-7, GTC 343130 733052-07-8, GTC 330346  
733052-08-9, GTC 341772 750595-50-7, GTC 343131  
750595-51-8, GTC 096296  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (inhibitors of bacterial enoyl-acyl carrier protein reductase)

IT 296797-06-3, GTC 268733 296798-15-7, GTC 268724  
300844-13-7, GTC 268726 340808-61-9, GTC 004061  
354555-67-2, GTC 268963 445266-27-3, GTC 268776  
445383-75-5, GTC 268847 496018-68-9, GTC 268925  
733052-04-5, GTC 343129 733052-06-7, GTC 343130  
733052-07-8, GTC 330346 733052-08-9, GTC 341772  
750595-50-7, GTC 343131 750595-51-8, GTC 096296  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (inhibitors of bacterial enoyl-acyl carrier protein reductase)

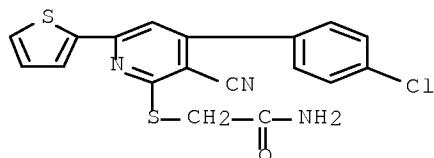
RN 296797-06-3 HCPLUS

CN Acetamide, N-[3-(acetylamino)phenyl]-2-[(3-cyano-4,6-di-2-thienyl-2-pyridinyl)thio]- (CA INDEX NAME)



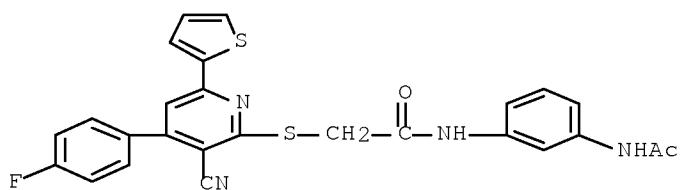
RN 296798-15-7 HCPLUS

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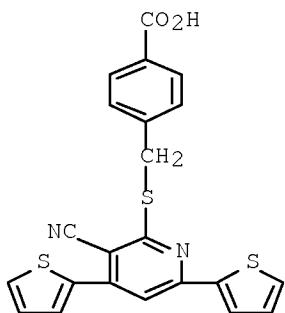


RN 300844-13-7 HCPLUS

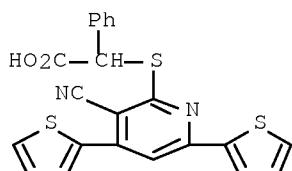
CN Acetamide, N-[3-(acetylamino)phenyl]-2-[(3-cyano-4-(4-fluorophenyl)-6-(2-thienyl)-2-pyridinyl)thio]- (CA INDEX NAME)



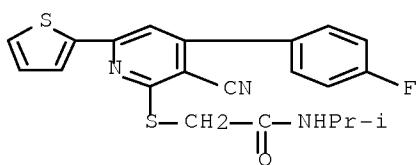
RN 340808-61-9 HCAPLUS  
 CN Benzoic acid, 4-[[(3-cyano-4,6-di-2-thienyl-2-pyridinyl)thio]methyl]- (CA INDEX NAME)



RN 354555-67-2 HCAPLUS  
 CN Benzeneacetic acid,  $\alpha$ -[(3-cyano-4,6-di-2-thienyl-2-pyridinyl)thio]- (CA INDEX NAME)

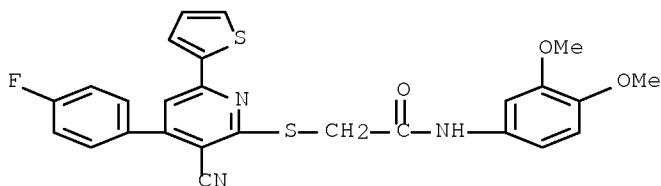


RN 445266-27-3 HCAPLUS  
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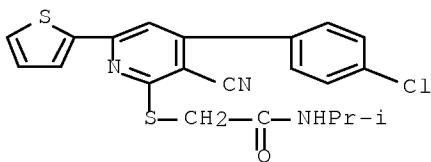
RN 445383-75-5 HCAPLUS

CN Acetamide, 2-[ [3-cyano-4-(4-fluorophenyl)-6-(2-thienyl)-2-pyridinyl]thio]-N-(3,4-dimethoxyphenyl)- (CA INDEX NAME)



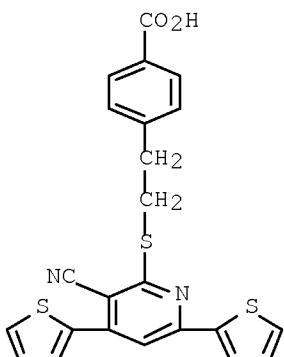
RN 496018-68-9 HCAPLUS

CN Acetamide, 2-[ [4-(4-chlorophenyl)-3-cyano-6-(2-thienyl)-2-pyridinyl]thio]-N-(1-methylethyl)- (CA INDEX NAME)



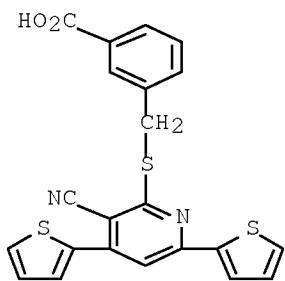
RN 733052-04-5 HCAPLUS

CN Benzoic acid, 4-[2-[ (3-cyano-4,6-di-2-thienyl-2-pyridinyl)thio]ethyl]- (CA INDEX NAME)

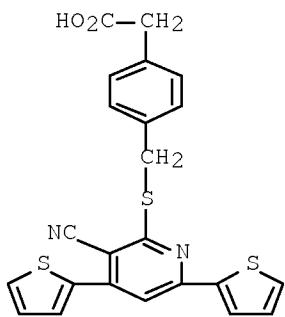


RN 733052-06-7 HCAPLUS

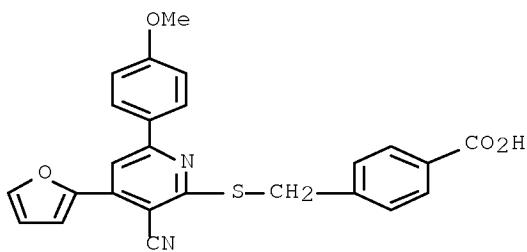
CN Benzoic acid, 3-[ [ (3-cyano-4,6-di-2-thienyl-2-pyridinyl)thio]methyl]- (CA INDEX NAME)



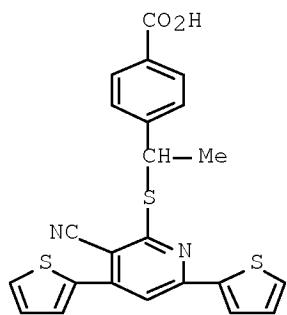
RN 733052-07-8 HCAPLUS  
 CN Benzeneacetic acid, 4-[[[3-cyano-4,6-di-2-thienyl-2-pyridinyl)thio]methyl]-  
 (CA INDEX NAME)



RN 733052-08-9 HCAPLUS  
 CN Benzoic acid, 4-[[[3-cyano-4-(2-furanyl)-6-(4-methoxyphenyl)-2-pyridinyl)thio]methyl]-  
 (CA INDEX NAME)

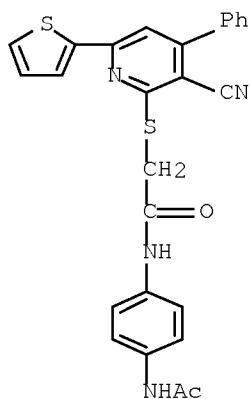


RN 750595-50-7 HCAPLUS  
 CN Benzoic acid, 4-[1-[(3-cyano-4,6-di-2-thienyl-2-pyridinyl)thio]ethyl]-  
 (CA INDEX NAME)



RN 750595-51-8 HCPLUS

CN Acetamide, N-[4-(acetylamino)phenyl]-2-[[3-cyano-4-phenyl-6-(2-thienyl)-2-pyridinyl]thio]- (CA INDEX NAME)



REFERENCE COUNT:

26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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YOU HAVE REQUESTED DATA FROM FILE 'HCPLUS, USPATFULL' - CONTINUE? (Y)/N:y

L58 ANSWER 3 OF 3 USPATFULL on STN

ACCESSION NUMBER: 2007:30915 USPATFULL Full-text

TITLE: Antibacterial fab i inhibitors

INVENTOR(S): Moir, Donald T., Lexington, MA, UNITED STATES

Xiang, Yibin, Acton, MA, UNITED STATES

Arvanites, Anthony C., New Bedford, MA,  
UNITED STATESAli, Syed Masarrat, North Andover, MA, UNITED  
STATES

Geng, Bolin, Andover, MA, UNITED STATES

Ashwell, Mark A., Carlisle, MA, UNITED STATES

Orqueira, Hernan Antonio, Cambridge, MA,

UNITED STATES  
Kaplan, Alan P., Kings Park, NY, UNITED  
 STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20070027190	A1	20070201
APPLICATION INFO.:	US 2004-542351	A1	20040116 (10)
	WO 2004-US1327		20040116
			20060807 PCT 371 date

	NUMBER	DATE
PRIORITY INFORMATION:	US 2003-441411P	20030117 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	HAMILTON, BROOK, SMITH & REYNOLDS, P.C., 530 VIRGINIA ROAD, P.O. BOX 9133, CONCORD, MA, 01742-9133, US	
NUMBER OF CLAIMS:	49	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	2 Drawing Page(s)	
LINE COUNT:	1013	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

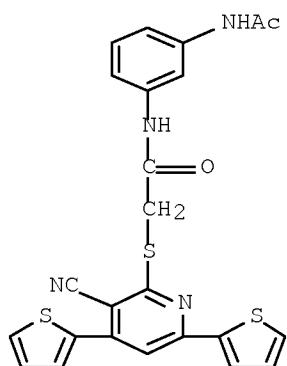
AB Disclosed herein are antibacterial compounds that inhibit fabI, a NADH-dependent enoyl [acyl carrier protein] reductase enzyme in the fatty acid biosynthesis pathway. The compounds are represented by structural formulas Ia and Ib: R1 and R2 are independently monocyclic aryl or heteroaryl groups, wherein the groups represented by R1 and R2 are optionally substituted with one or more acyclic substituents; R3 is --H or an optionally substituted C1-C8 aliphatic, C3-C8 cycloaliphatic, aryl, or heteroaryl group. X1 is a bond or a C1-C3 alkylene chain that is optionally substituted with a C1-C4 alkyl or an acidic group. X2 is an aryl, heteroaryl or C3-C8 cycloaliphatic ring, wherein the group represented by X2 is optionally substituted with triazole, tetrazole, and/or one or more acyclic substituents. ##STR1##

IT 296797-06-3P 296798-15-7P 300844-13-7P  
 300844-14-8P 328282-01-5P 340808-61-9P  
 354545-70-3P 354555-67-2P 445266-27-3P  
 445383-75-5P 496018-68-9P 733052-04-5P  
 733052-05-6P 733052-06-7P 733052-07-8P  
 733052-08-9P 733052-09-0P

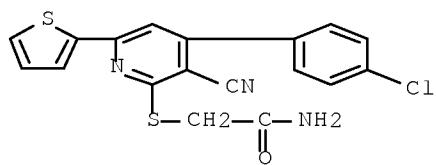
(preparation of thienylpyridinecarbonitriles as bacterial enoyl-ACP reductase (FabI) inhibitors.)

RN 296797-06-3 USPATFULL

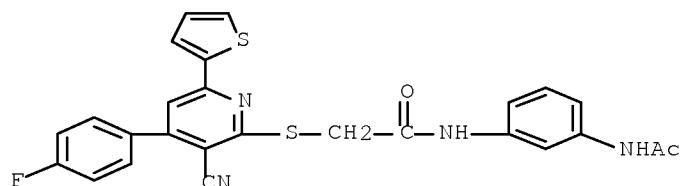
CN Acetamide, N-[3-(acetylamino)phenyl]-2-[(3-cyano-4,6-di-2-thienyl-2-pyridinyl)thio]- (CA INDEX NAME)



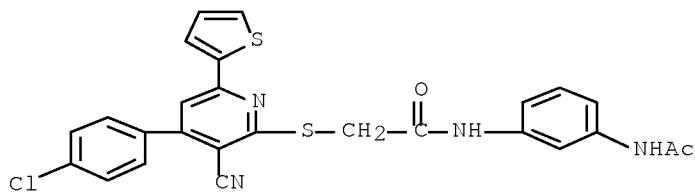
RN 296798-15-7 USPATFULL  
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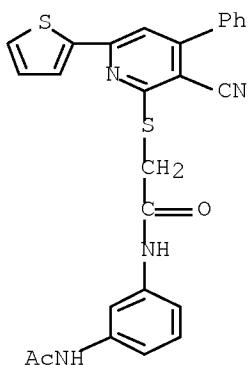
RN 300844-13-7 USPATFULL  
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 (CA INDEX NAME)



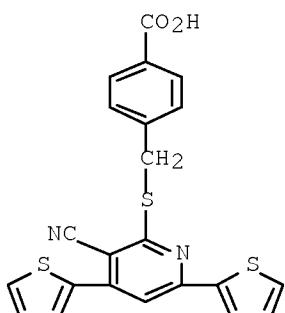
RN 300844-14-8 USPATFULL  
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 (CA INDEX NAME)



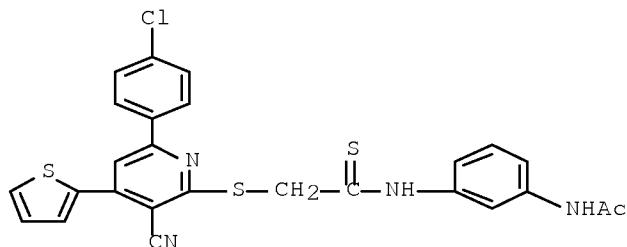
RN 328282-01-5 USPATFULL  
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RN 340808-61-9 USPATFULL  
 CN Benzoic acid, 4-[(3-cyano-4,6-di-2-thienyl-2-pyridinyl)thio]methyl- (CA INDEX NAME)

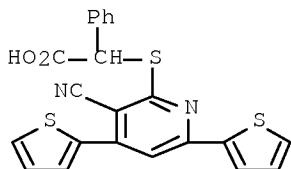


RN 354545-70-3 USPATFULL  
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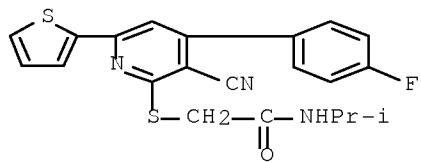
RN 354555-67-2 USPATFULL

CN Benzeneacetic acid,  $\alpha$ -[ (3-cyano-4,6-di-2-thienyl-2-pyridinyl)thio]-  
(CA INDEX NAME)



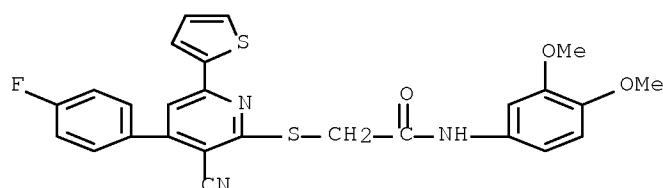
RN 445266-27-3 USPATFULL

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N-(1-methylethyl)- (CA INDEX NAME)



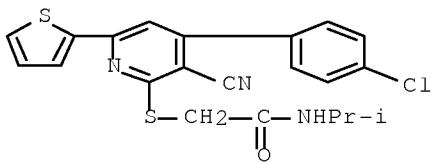
RN 445383-75-5 USPATFULL

CN Acetamide, 2-[ [3-cyano-4-(4-fluorophenyl)-6-(2-thienyl)-2-pyridinyl]thio]-  
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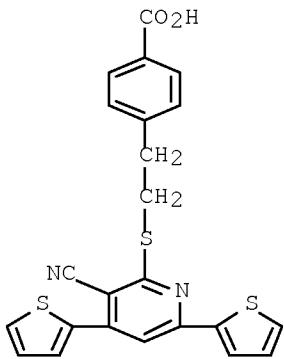
RN 496018-68-9 USPATFULL

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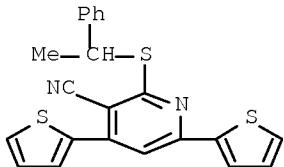
RN 733052-04-5 USPATFULL

CN Benzoic acid, 4-[2-[(3-cyano-4,6-di-2-thienyl-2-pyridinyl)thio]ethyl]- (CA INDEX NAME)



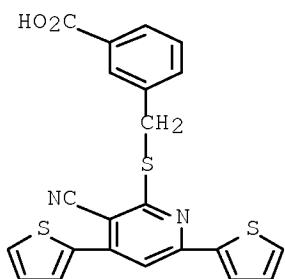
RN 733052-05-6 USPATFULL

CN 3-Pyridinecarbonitrile, 2-[(1-phenylethyl)thio]-4,6-di-2-thienyl- (CA INDEX NAME)



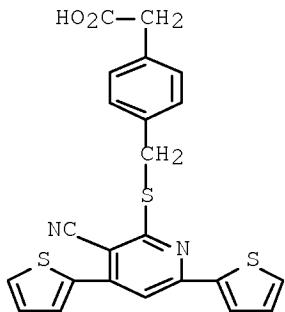
RN 733052-06-7 USPATFULL

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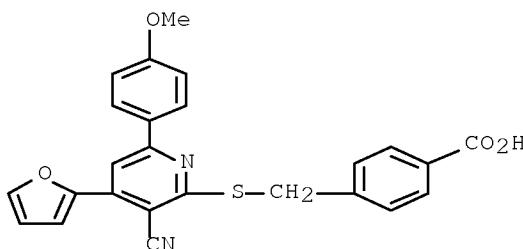
RN 733052-07-8 USPATFULL

CN Benzeneacetic acid, 4-[(3-cyano-4,6-di-2-thienyl-2-pyridinyl)thio]methyl-  
(CA INDEX NAME)



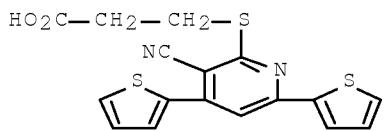
RN 733052-08-9 USPATFULL

CN Benzoic acid, 4-[(3-cyano-4-(2-furanyl)-6-(4-methoxyphenyl)-2-pyridinyl)thio]methyl-  
(CA INDEX NAME)



RN 733052-09-0 USPATFULL

CN Propanoic acid, 3-[(3-cyano-4,6-di-2-thienyl-2-pyridinyl)thio]-  
(CA INDEX NAME)



=> file stnguide

FILE 'STNGUIDE' ENTERED AT 17:12:10 ON 18 SEP 2008

USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT

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FILE CONTAINS CURRENT INFORMATION.

LAST RELOADED: Sep 12, 2008 (20080912/UP).

=> d his ful

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(FILE 'HOME' ENTERED AT 16:09:04 ON 18 SEP 2008)

FILE 'STNGUIDE' ENTERED AT 16:09:07 ON 18 SEP 2008

FILE 'ZCAPLUS' ENTERED AT 16:09:16 ON 18 SEP 2008
      E US2006-542351/APPS

FILE 'HCAPLUS' ENTERED AT 16:09:28 ON 18 SEP 2008
L1      1 SEA ABB=ON PLU=ON US2006-542351/APPS
          SAVE TEMP L1 ZAR351HCAAPP/A

FILE 'STNGUIDE' ENTERED AT 16:09:42 ON 18 SEP 2008

FILE 'WPIX' ENTERED AT 16:09:51 ON 18 SEP 2008
L2      2 SEA ABB=ON PLU=ON US2006-542351/APPS
          SAVE TEMP L2 ZAR351WPIAPP/A

FILE 'STNGUIDE' ENTERED AT 16:10:13 ON 18 SEP 2008
      D QUE L1

FILE 'HCAPLUS' ENTERED AT 16:11:27 ON 18 SEP 2008
      D IBIB ED ABS IND L1

FILE 'STNGUIDE' ENTERED AT 16:11:27 ON 18 SEP 2008
      D QUE L2

FILE 'WPIX' ENTERED AT 16:12:15 ON 18 SEP 2008
      D IALL CODE L2 1-2

FILE 'STNGUIDE' ENTERED AT 16:12:16 ON 18 SEP 2008

FILE 'REGISTRY' ENTERED AT 16:12:57 ON 18 SEP 2008

FILE 'HCAPLUS' ENTERED AT 16:13:00 ON 18 SEP 2008
L3      TRA PLU=ON L1 1- RN :      22 TERMS

FILE 'REGISTRY' ENTERED AT 16:13:03 ON 18 SEP 2008
L4      22 SEA ABB=ON PLU=ON L3
          SAVE TEMP L4 ZAR351REGAPP/A
          D SCAN

FILE 'STNGUIDE' ENTERED AT 16:13:42 ON 18 SEP 2008

FILE 'LREGISTRY' ENTERED AT 16:15:45 ON 18 SEP 2008
L5      STR

FILE 'REGISTRY' ENTERED AT 16:19:54 ON 18 SEP 2008
L6      20 SEA SSS SAM L5
          D QUE STAT

FILE 'STNGUIDE' ENTERED AT 16:20:06 ON 18 SEP 2008

FILE 'LREGISTRY' ENTERED AT 16:22:42 ON 18 SEP 2008
L7      STR L5

FILE 'REGISTRY' ENTERED AT 16:24:11 ON 18 SEP 2008
L8      22 SEA SSS SAM L7
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10/542,351

D QUE STAT

FILE 'STNGUIDE' ENTERED AT 16:24:28 ON 18 SEP 2008

FILE 'REGISTRY' ENTERED AT 16:29:03 ON 18 SEP 2008

L9           334 SEA SSS FUL L7  
            SAVE TEMP L9 ZAR351PSET1/A  
L10         8 SEA ABB=ON PLU=ON L4 AND L9  
            SAVE TEMP L10 ZAR351REGCLM/A  
L11         14 SEA ABB=ON PLU=ON L4 NOT L9  
            D SCAN

FILE 'LREGISTRY' ENTERED AT 16:30:55 ON 18 SEP 2008

L12         STR L7

FILE 'REGISTRY' ENTERED AT 16:31:17 ON 18 SEP 2008

L13         50 SEA SSS SAM L12

FILE 'STNGUIDE' ENTERED AT 16:31:25 ON 18 SEP 2008

D QUE STAT

FILE 'REGISTRY' ENTERED AT 16:35:04 ON 18 SEP 2008

L14         6844 SEA SSS FUL L12  
            SAVE TEMP L14 ZAR351PSET1/A  
L15         17 SEA ABB=ON PLU=ON L4 AND L14  
            SAVE TEMP L15 ZAR351REGCLM/A

FILE 'STNGUIDE' ENTERED AT 16:36:11 ON 18 SEP 2008

FILE 'REGISTRY' ENTERED AT 16:36:52 ON 18 SEP 2008

L16         5 SEA ABB=ON PLU=ON L4 NOT L15  
            D SCAN

FILE 'STNGUIDE' ENTERED AT 16:37:13 ON 18 SEP 2008

FILE 'ZCAPLUS' ENTERED AT 16:37:40 ON 18 SEP 2008

L17         QUE ABB=ON PLU=ON MOIR, D?/AU  
L18         QUE ABB=ON PLU=ON XIANG, Y?/AU  
L19         QUE ABB=ON PLU=ON ARVANITES, A?/AU  
L20         QUE ABB=ON PLU=ON ARVANITES, T?/AU  
L21         QUE ABB=ON PLU=ON ALI, S?/AU  
L22         QUE ABB=ON PLU=ON GENG, B?/AU  
L23         QUE ABB=ON PLU=ON ASHWELL, M?/AU  
L24         QUE ABB=ON PLU=ON ORGUEIRA, H?/AU  
L25         QUE ABB=ON PLU=ON KAPLAN, A?/AU  
L26         QUE ABB=ON PLU=ON (OSCIENT OR ARQULE)/CS, SO, PA  
L27         QUE ABB=ON PLU=ON AY<2004 OR PY<2004 OR PRY<2004 OR MY<2004  
            OR REVIEW/DT  
L28         QUE ABB=ON PLU=ON INFECTION+PFT, OLD, NEW, NT/CT(L)BACTER?  
L29         QUE ABB=ON PLU=ON "ANTIBACTERIAL AGENTS"+PFT, OLD, NEW/CT  
L30         QUE ABB=ON PLU=ON ANTIINFECT? OR (ANTI(1W) INFECT?)  
L31         QUE ABB=ON PLU=ON ANTIBACTER? OR ANTIBIOT? OR ANTIMICROB? OR  
            (ANTI(1W)(BACTER? OR BIOT? OR MICROB?))  
L32         QUE ABB=ON PLU=ON (A61P0031-04 OR A61P0031-06 OR A61P0031-08)  
            / IPC

FILE 'HCAPLUS' ENTERED AT 16:45:16 ON 18 SEP 2008

L33         67 SEA ABB=ON PLU=ON L14  
L34         5 SEA ABB=ON PLU=ON L15  
L35         67 SEA ABB=ON PLU=ON (L33 OR L34)

L36            8 SEA ABB=ON PLU=ON L35 AND (L28 OR L29 OR L30 OR L31 OR L32)  
 L37            67 SEA ABB=ON PLU=ON (L33 OR L34 OR L35 OR L36)  
 L38            2 SEA ABB=ON PLU=ON L37 AND (L17 OR L18 OR L19 OR L20 OR L21  
               OR L22 OR L23 OR L24 OR L25 OR L26)  
               SAVE TEMP L38 ZAR351HCAINV/A  
 L39            65 SEA ABB=ON PLU=ON L37 NOT L38  
               D SCAN TI HIT  
 L40            49 SEA ABB=ON PLU=ON L39 AND L27  
               SAVE TEMP L40 ZAR351HCAB/A  
 L41            1 SEA ABB=ON PLU=ON L38 AND L1

FILE 'STNGUIDE' ENTERED AT 16:49:34 ON 18 SEP 2008

FILE 'REGISTRY' ENTERED AT 16:49:53 ON 18 SEP 2008  
 L42            27 SEA ABB=ON PLU=ON L14 AND (USPATFULL OR USPAT2 OR USPATOLD)/L  
               C  
 L\*\*\* DEL      0 S L42 AND L17-L26  
               D QUE

FILE 'USPATFULL, USPATOLD, USPAT2' ENTERED AT 16:51:16 ON 18 SEP 2008  
 L43            6 SEA ABB=ON PLU=ON L42  
 L44            1 SEA ABB=ON PLU=ON L43 AND (L17 OR L18 OR L19 OR L20 OR L21  
               OR L22 OR L23 OR L24 OR L25 OR L26)  
 L45            5 SEA ABB=ON PLU=ON L43 NOT L44  
 L46            3 SEA ABB=ON PLU=ON L45 AND L27

FILE 'REGISTRY' ENTERED AT 16:52:05 ON 18 SEP 2008  
 L47            0 SEA ABB=ON PLU=ON L14 AND (MEDLINE OR BIOSIS OR EMBASE OR  
               CABA OR BIOTECHNO OR DRUGU OR VETU)/LC  
 L48            ANALYZE PLU=ON L14 1- LC :            9 TERMS  
               D 1-

FILE 'WPIX' ENTERED AT 16:59:02 ON 18 SEP 2008  
               D QUE L14  
 L49            4 SEA SSS SAM L12  
 L50            26 SEA SSS FUL L12  
               SAVE TEMP L50 ZAR351WPIS/A  
               SELECT L50 1- SDCN  
 L51            7 SEA ABB=ON PLU=ON (RABM4F/DCN OR RAF3OD/DCN OR RAF3OJ/DCN OR  
               RAF3ON/DCN OR RAF3OO/DCN OR RAF3OQ/DCN OR RAF3OS/DCN OR  
               RAF3OT/DCN OR RAF3OY/DCN OR RAF3OZ/DCN OR RAF3PA/DCN OR  
               RAF3PB/DCN OR RAF3P4/DCN OR RAF3P5/DCN OR RAF3P6/DCN OR  
               RAF3P9/DCN OR RAI1QS/DCN OR RAOHFY/DCN OR RAOHFZ/DCN OR  
               RAOHG0/DCN OR RAOHG1/DCN OR RAOHG2/DCN OR RAOHG3/DCN OR  
               RAOHG4/DCN OR RAR23T/DCN OR RAVPWX/DCN) OR L50/DCR  
 L52            1 SEA ABB=ON PLU=ON L51 AND (L17 OR L18 OR L19 OR L20 OR L21  
               OR L22 OR L23 OR L24 OR L25 OR L26)  
 L53            1 SEA ABB=ON PLU=ON L52 AND L2  
 L54            1 SEA ABB=ON PLU=ON (L52 OR L53)  
 L55            6 SEA ABB=ON PLU=ON L51 NOT L54  
 L56            2 SEA ABB=ON PLU=ON L55 AND L27  
               D TRI 1-2

FILE 'STNGUIDE' ENTERED AT 17:01:38 ON 18 SEP 2008

D QUE STAT L14  
 D QUE NOS L40  
 D QUE NOS L46  
 D QUE L47  
 D QUE STAT L50  
 D QUE L56

FILE 'HCAPLUS, USPATFULL, WPIX' ENTERED AT 17:03:28 ON 18 SEP 2008  
 L57        51 DUP REM L40 L46 L56 (3 DUPLICATES REMOVED)  
             ANSWERS '1-49' FROM FILE HCAPLUS  
             ANSWERS '50-51' FROM FILE USPATFULL  
             SAVE TEMP L57 ZAR351MAIN/A

FILE 'STNGUIDE' ENTERED AT 17:03:50 ON 18 SEP 2008

FILE 'HCAPLUS, USPATFULL' ENTERED AT 17:04:22 ON 18 SEP 2008  
       D IBIB ED ABS HITIND HITSTR 1-25

FILE 'STNGUIDE' ENTERED AT 17:04:38 ON 18 SEP 2008

FILE 'HCAPLUS, USPATFULL' ENTERED AT 17:06:43 ON 18 SEP 2008  
       D IBIB ED ABS HITIND HITSTR 26-49

FILE 'STNGUIDE' ENTERED AT 17:06:51 ON 18 SEP 2008

FILE 'HCAPLUS, USPATFULL' ENTERED AT 17:08:58 ON 18 SEP 2008  
       D IBIB AB HITSTR 50-51

FILE 'STNGUIDE' ENTERED AT 17:09:05 ON 18 SEP 2008  
       D QUE NOS L38  
       D QUE NOS L44  
       D QUE L47  
       D QUE L54

FILE 'HCAPLUS, USPATFULL, WPIX' ENTERED AT 17:10:37 ON 18 SEP 2008  
 L58        3 DUP REM L38 L44 L54 (1 DUPLICATE REMOVED)  
             ANSWERS '1-2' FROM FILE HCAPLUS  
             ANSWER '3' FROM FILE USPATFULL  
             SAVE TEMP L58 ZAR351INV/A

FILE 'STNGUIDE' ENTERED AT 17:10:58 ON 18 SEP 2008

FILE 'HCAPLUS, USPATFULL' ENTERED AT 17:11:24 ON 18 SEP 2008  
       D IBIB ED ABS HITIND HITSTR 1-2

FILE 'STNGUIDE' ENTERED AT 17:11:31 ON 18 SEP 2008

FILE 'HCAPLUS, USPATFULL' ENTERED AT 17:12:07 ON 18 SEP 2008  
       D IBIB AB HITSTR 3

FILE 'STNGUIDE' ENTERED AT 17:12:08 ON 18 SEP 2008

FILE 'STNGUIDE' ENTERED AT 17:12:10 ON 18 SEP 2008

FILE HOME

FILE STNGUIDE  
 FILE CONTAINS CURRENT INFORMATION.  
 LAST RELOADED: Sep 12, 2008 (20080912/UP).

FILE ZCPLUS

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FILE COVERS 1907 - 18 Sep 2008 VOL 149 ISS 12  
FILE LAST UPDATED: 17 Sep 2008 (20080917/ED)

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FILE LAST UPDATED: 17 Sep 2008 (20080917/ED)

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FILE WPIX

FILE LAST UPDATED: 12 SEP 2008 <20080912/UP>  
MOST RECENT UPDATE: 200858 <200858/DW>  
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE  
>>> Now containing more than 1.1 million chemical structures in DCR <<<  
>>> IPC Reform backfile reclassifications have been loaded to the end of June 2008. No update date (UP) has been created for the reclassified documents, but they can be identified by 20060101/UPIC and 20061231/UPIC, 20070601/UPIC, 20071001/UPIC, 20071130/UPIC, 20080401/UPIC and 20080701/UPIC.  
ECLA reclassifications to June and US national classifications to the end of April 2008 have also been loaded. Update dates 20080401 and 20080701/UPEC and /UPNC have been assigned to these. <<<

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[http://www.stn-international.com/archive/presentations/DWPINaVist2\\_0608.p](http://www.stn-international.com/archive/presentations/DWPINaVist2_0608.p)

>>> HELP for European Patent Classifications see HELP ECLA, HELP ICO <<<

FILE REGISTRY

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 16 SEP 2008 HIGHEST RN 1049663-83-3

DICTIONARY FILE UPDATES: 16 SEP 2008 HIGHEST RN 1049663-83-3

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FILE USPATFULL

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 18 Sep 2008 (20080918/PD)

FILE LAST UPDATED: 18 Sep 2008 (20080918/ED)

HIGHEST GRANTED PATENT NUMBER: US7426752

HIGHEST APPLICATION PUBLICATION NUMBER: US20080229468

CA INDEXING IS CURRENT THROUGH 18 Sep 2008 (20080918/UPCA)

ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 18 Sep 2008 (20080918/PD)

REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2008

USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2008

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FILE USPATOLD

FILE COVERS U.S. PATENTS 1790-1975

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FILE USPAT2

FILE COVERS 2001 TO PUBLICATION DATE: 18 Sep 2008 (20080918/PD)  
FILE LAST UPDATED: 18 Sep 2008 (20080918/ED)  
HIGHEST GRANTED PATENT NUMBER: US20080206279  
HIGHEST APPLICATION PUBLICATION NUMBER: US20080228403  
CA INDEXING IS CURRENT THROUGH 18 Sep 2008 (20080918/UPCA)  
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 18 Sep 2008 (20080918/PD)  
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Apr 2008  
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Apr 2008

USPAT2 now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2008.

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